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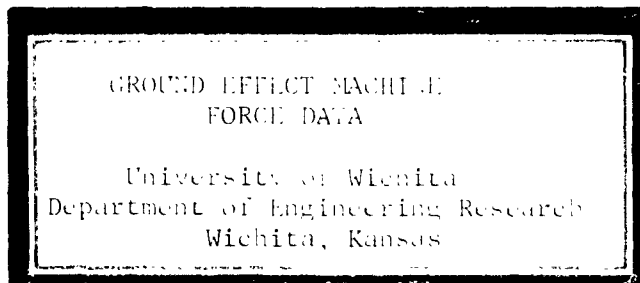
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TABULATED FORCE AND MOMENT DATA
FOR A SERIES OF CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODELS

1-41-7

By

Claude A. Foltz

Engineering Report 352-7

Prepared for
Office of Naval Research
Air Branch
Washington, D.C.
under
Contract NONR 201(03)

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

INTRODUCTION

The Department of Engineering Research, University of Wichita has conducted wind tunnel testing on nine circular, annular jet, ground effect machine models. The effects of slot width, convergence angle of the jet and operating height on the dynamic performance of this type of vehicle were inspected. Slot thickness to model diameter ratios of one, five and ten per cent were tested utilizing convergence angles of 0° , 30° and 60° .

MODEL DESCRIPTION

The nine models utilized in this test program were designed with the same outer surface geometry. The differences between models are in slot width and convergence angle only. UWER Reports 352-1 and 352-6 provide general information concerning the model development and testing program.

The slot width, as defined for this program, is the width of the annular nozzle measured in the plane of the base plate. This dimension is equal to the nozzle width normal to the flow direction for only one convergence angle, i.e., 0° . The normal widths for convergence angles of 30° and 60° are therefore, a function of the angle of convergence.

The basic dimension used to establish the slot to diameter ratio is the diameter of the outer lip of the nozzle, 16.0". This dimension is constant for all models and is also the diameter from which the reference base area is calculated. See Figure 1.

The pitching moments are measured about an axis centered at the model geometric center and lying on the plane of the base plate, as shown in Figure 1.

The mass flow measurement scheme is described in UWER Report No. 352-4.

The total pressure of the secondary air supply system was measured as shown in Figure 1. This pressure, given the symbol P_M , and the freestream static pressure in the test section, P_o , were used along with tunnel dynamic pressure to establish a test point. Selected values of P_M/P_o and tunnel dynamic pressure were set, then force and pressure data was taken. In setting a particular ratio of model total to test section static pressure it was

found that excessive time was being consumed in holding the pressure ratio exactly. As a result, the pressure ratio was set to the selected value and then no attempt was made to counteract the small fluctuations which developed in the air supply system. The actual values of pressure were recorded however, and these appear on the tabulated data sheets.

CORRECTION OF DATA

The correction of measured forces and moments was aggravated by interaction of secondary air supply forces as described in UWER Report No. 352-1. The correction procedure outlined in that report was found to be insufficient for correction of drag and pitching moment values. The procedure with regard to drag and pitching moment was modified as follows. With the model at zero degrees angle of attack and zero wind tunnel velocity, the secondary air supply system was energized in successive steps, covering the range of pressure ratios to be used for that particular model. Measured values of drag and pitching moment were plotted versus measured mass flow. These values were then taken to be the extraneous secondary air supply forces and the final data was corrected accordingly. The procedure outlined in UWER Report No. 352-1 was found to work quite well for the lift data.

DATA PRESENTATION

The tabulated values included in this report are reproductions of the final corrected data readout sheets from an IBM 610 digital computer. The number of digits presented is the minimum which this machine will print and should not be considered to be a measure of accuracy.

An additional check program has been conducted to eliminate bad data points which might have occurred by reasons of human errors during the reduction process.

A key for identification of the tabulated values is provided at the beginning of the data set for each of the nine models.

The plotted curves, already released, were derived from this data prior to final correction. A given test point, corresponding to a plotted symbol, may be found by noting the h/D , angle of attack, and momentum coefficient described by the symbol then locating the test point in the section of data corresponding to the specific model and h/D .

NOMENCLATURE

The symbols used in this test program are defined and tabulated below:

Run Number: The run number, as it appears on the tabulated data sheets, is comprised of three parts. The numbers before the decimal point indicate the number assigned to a particular model, height, pressure ratio, and tunnel dynamic pressure. The first two numbers following the decimal point give the slot to diameter ratio of the model. The last two digits are the convergence angle.

For example - 138.0100 indicates test point number 138 with t/D of 1% and convergence angle of zero degrees.

α , Angle of Attack: The angle of attack is the incidence angle between model base plate and the ground board, positive nose up.

h/D , height to diameter ratio: The characteristic diameter of 16.0" is the same as defined for t/D and reference area.

L	corrected lift, lbs
D	corrected drag, lbs
P_M	corrected pitching moment, ft-lbs
S	reference base area, 1.39 sq ft
D	reference diameter, 1.33 ft
w	measured weight flow, lbs/sec
g	acceleration of gravity, 32.2 ft/sec ²
\dot{m}	mass rate of flow, w/g, $\frac{lb\text{-}sec}{ft}$
V_o	wind tunnel air velocity, ft/sec

a speed of sound, ft/sec
 γ ratio of specific heats, 1.4
 V_j jet velocity ft/sec calculated from isentropic relationships utilizing the following equation:

$$V_j = a \left[\frac{2}{\gamma-1} \left\{ 1 - \left(\frac{P_o}{P_m} \right)^{\frac{\gamma-1}{\gamma}} \right\} \right]^{\frac{1}{2}}$$

$\dot{m}V_j$ jet momentum, lbs
 q wind tunnel dynamic pressure, lb/ft²
 C_L L/qS
 C_D D/qS
 C_M P_M/qSD
 C_μ $\dot{m}V_j/qS$
 C_L' $L/qS + \dot{m}V_j$
 C_μ' $\frac{\dot{m}V_j}{qS + \dot{m}V_j}$
 A Augmentation ratio, $\frac{C_L}{C_\mu}$
 ρ density in test section, slugs/ft³
 ρ_1 density of secondary air, slugs/ft³
 Q volume flow, ft³/sec
 P_M model total pressure measured as shown in Fig. 1, lb/ft²
 P_o test section static pressure, lb/ft²
 BP barometric pressure lb/ft²

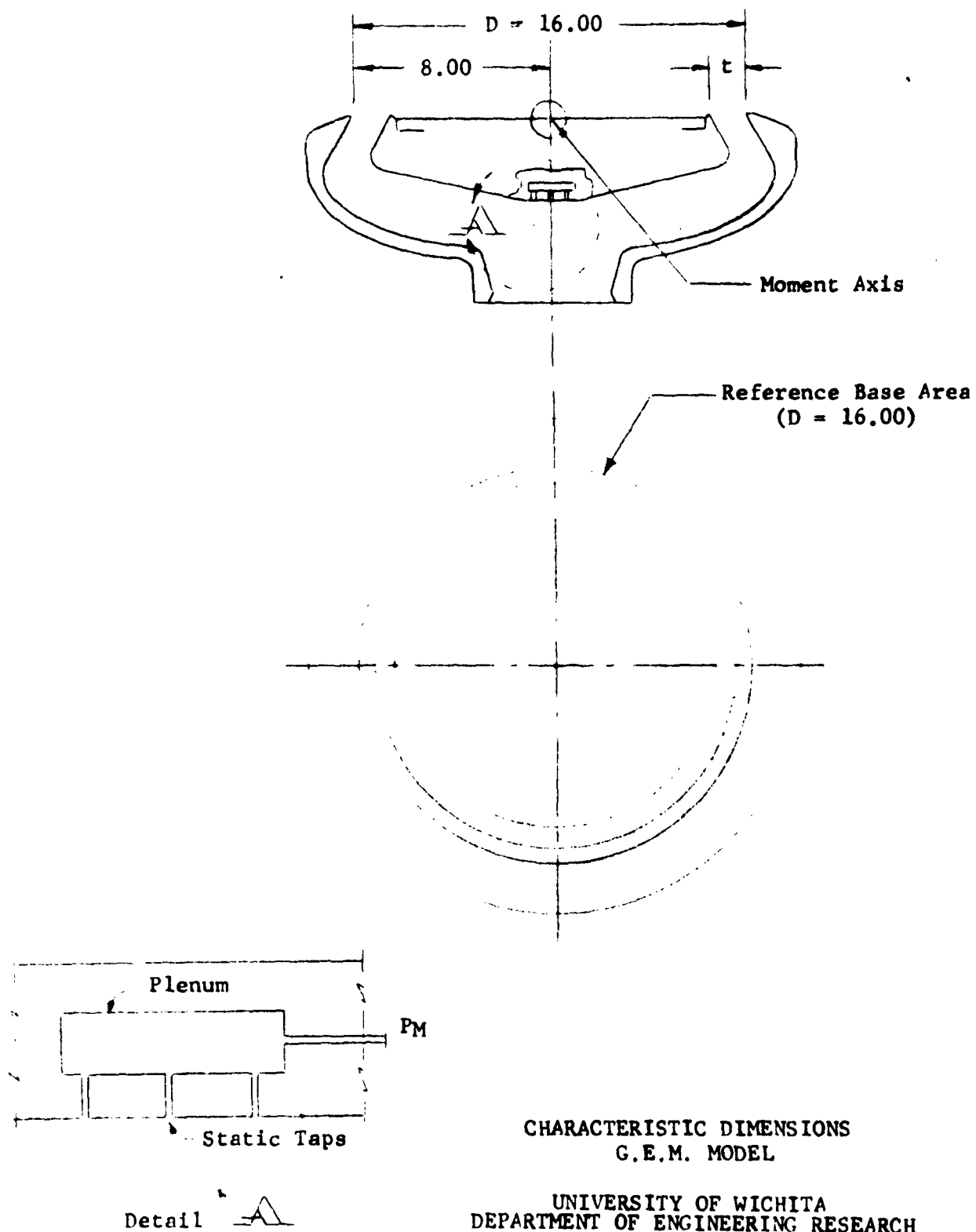


Figure 1

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF ONE PER CENT
AND A JET CONVERGENCE ANGLE OF 0°

Key for Reading Following data:

RUN NO.	α	h/D	ρ	BP	
C_L	C_D	C_M	L/D	V_j	
C_μ	V	V_j/V_o	C_L/C_μ	ρ_l	
Q	$\dot{m}V_j$	C_L	C_μ	q	PM/P_o

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

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FORCE

1.01000+	.000000+	.500000+	.002038	2010.6	
.161386+	.212295+	.111656-	.854406+	.000000+	
.000000+	140.902+	.000000+	000000+	.002044+	
.000000+	.000000+	.161386+	.000000+	20.0	1.000
2.01000+	2.50000+	.500000+	.002038	2010.6	
.216952+	.223291+	.063231-	.971614+	.000000+	
.000000+	140.902+	.000000+	000000+	.002044+	
.000000+	.000000+	.216952+	.000000+	20.0	1.000
3.01000+	2.50000-	.500000+	.002038	2010.6	
.110254+	.196225+	.146970-	.561377+	.000000+	
.000000+	140.902+	.000000+	000000+	.002044+	
.000000+	.000000+	.110254+	.000000+	20.0	1.000
4.01000+	2.50000-	.500000+	.002037	2010.6	
.109612+	.201282+	.143577-	.544599+	.000000+	
.000000+	198.260+	.000000+	000000+	.002044+	
.000000+	.000000+	.109612+	.000000+	40.0	1.000
5.01000+	.000000+	.500000+	.002037	2010.6	
.179702+	.212393+	.115089-	.246080+	.000000+	
.000000+	198.260+	.000000+	000000+	.002044+	
.000000+	.000000+	.179702+	.000000+	40.0	1.000
6.01000+	2.50000+	.500000+	.002037	2010.6	
.226424+	.229487+	.081844-	.986652+	.000000+	
.000000+	198.260+	.000000+	000000+	.002044+	
.000000+	.000000+	.226424+	.000000+	40.0	1.000

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7.01000+ A	2.50000+	.500000+	.002038	2011.3	
.222830+	.255556+	.076197-	.871944+	142.154+	
.037496+	198.225+	.717135+	5.94277+	.002027+	1.009
7.27588+	2.09700+	.214777+	.036140+	40.0	
8.01000+ A	.000000+	.500000+	.002038	2011.3	
.168920+	.233333+	.113292-	.723941+	142.397+	
.03756+	198.225+	.718362+	4.49730+	.002020+	1.009
7.30079+	2.10058+	.162805+	.036200+	40.0	
9.01000+ A	2.50000-	.500000+	.002038	2011.3	
.098836+	.229915+	.128961-	.429881+	142.519+	
.037592+	198.225+	.718975+	2.62916+	.002017+	1.009
7.31325+	2.10238+	.095255+	.036230+	40.0	
10.0100+ A	2.50000-	.500000+	.002039	2011.3	
.135151+	.257123+	.106476-	.525627+	142.882+	
.074591+	140.877+	1.01423+	1.81188+	.002006+	1.009
7.35063+	2.10774+	.125769+	.069413+	20.0	
11.0100+ A	.000000+	.500000+	.002039	2011.3	
.199169+	.258214+	.093996-	.769546+	142.882+	
.074591+	140.877+	1.01423+	2.67015+	.002006+	1.009
7.35063+	2.10774+	.185344+	.069413+	20.0	
12.0100+ A	2.50000+	.500000+	.002039	2011.3	
.256075+	.269810+	.058419-	.949095+	142.032+	
.74147+	140.877+	1.00820+	3.45359+	.002030+	1.009
7.26342+	2.09520+	.238398+	.069029+	20.0	
13.0100+ A	2.50000+	.500000+	.002039	2011.3	
.529934+	.356081+	.056176-	1.48823+	307.970+	
.338810+	140.877+	2.18608+	1.56410+	.002140+	1.049
14.5245+	9.57385+	.395824+	.253068+	20.0	
14.0100+ A	.000000+	.500000+	.002039	2011.3	
.483698+	.822249+	.081482-	1.50100+	307.970+	
.338810+	140.877+	2.18608+	1.42763+	.002140+	1.049
14.5245+	9.57385+	.361289+	.253068+	20.0	
15.0100+ A	2.50000-	.500000+	.002039	2011.3	
.433905+	.300258+	.110805-	1.44510+	307.970+	
.338810+	140.877+	2.18608+	1.28067+	.002140+	1.049
14.5245+	9.57385+	.324098+	.253068+	20.0	

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16.0100+ A	2.50000-	.500000+	.002033	2011.3	
.289320+	.279915+	.110530-	1.03360+	307.970+	
.171138+	198.225+	1.55363+	1.69007+	.002140+	
14.5245+	9.57385+	.247031+	.146166+	40.0	1.049
17.0100+ A	.000000+	.500000+	.002033	2011.3	
.355810+	.287180+	.094033-	1.23897+	308.237+	
.171337+	198.225+	1.55498+	2.07666+	.002064+	
15.0547+	9.58217+	.303704+	.146274+	40.0	1.049
18.0100+ A	2.50000+	.500000+	.002033	2011.3	
.409721+	.314956+	.057394-	1.30087+	307.970+	
.171138+	198.225+	1.55363+	2.39339+	.002140+	
14.5245+	9.57385+	.349833+	.146166+	40.0	1.049
19.0100+ A	2.50000+	.500000+	.002033	2011.3	
.979377+	.429060+	.140146-	2.28260+	734.256+	
.951248+	198.225+	3.70414+	1.02957+	.002450+	
29.5724+	53.1393+	.501923+	.407507+	40.0	1.284
20.0100+ A	.000000+	.500000+	.002033	2011.3	
.896714+	.368304+	.177328-	2.43140+	736.045+	
.953565+	198.225+	3.71316+	.940379+	.002433+	
29.7157+	53.3289+	.459013+	.408115+	40.0	1.284
21.0100+ A	2.50000-	.500000+	.002033	2011.3	
.797877+	.330770+	.191322-	2.41213+	737.235+	
.955107+	198.225+	3.71917+	.835330+	.002430+	
29.8129+	53.4152+	.408099+	.408519+	40.0	1.284
22.0100+ A	2.50000-	.500000+	.002039	2011.3	
1.42264+	.323941+	.282166-	4.39166+	737.235+	
1.82031+	140.577+	5.23316+	.752594+	.002430+	
29.5129+	53.4152+	.492209+	.654017+	20.0	1.284
23.0100+ A	.000000+	.500000+	.002039	2011.3	
1.50144+	.393295+	.254263-	3.82521+	737.235+	
1.82031+	140.577+	5.23316+	.795063+	.002430+	
29.5129+	53.4152+	.520511+	.654017+	20.0	1.284

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34.0100+A 1.43331+ 1.80031+ 9.6129+	2.50000+ .309067+ 140.877+ 53.4152+	.500000+ .251570- 5.2331+ .495901+	.002039 3.22396+ 7.2239+ .654017+	2011.3 737.235+ .002130+ 20.0	1.284
34.0100+ .093445+ .032236+ 7.5116+	2.50000- .229915+ 197.39+ 1.98706+	.400000+ .120162- .638066+ .090233+	.002016 .406433+ 2.63000+ .034311+	2001.5 125.952+ .002080+ 40.0	1.008
35.0100+ .106090+ .044141+ 8.06458+	.000000+ .14017+ 197.315+ 2.46562+	.400000+ .079831- .743769+ .178989+	.002045 .735886+ 4.23392+ .042275+	2001.5 147.203+ .002079+ 40.0	1.011
36.0100+ .265955+ .039660+ 7.62032+	2.50000+ .336342+ 198.260+ 2.21805+	.400000+ .034551+ .707741+ .255613+	.002037 .805101+ 5.70587+ .032147+	2001.5 140.317+ .002074+ 40.0	1.010
37.0100+ .156130+ .078580+ 7.61921+	2.50000- .243590+ 140.066+ 2.21046+	.400000+ .115352- 1.00090+ .145039+	.002063 .642433+ 1.99147+ .072355+	2001.5 140.193+ .002075+ 20.0	1.010
38.0100+ .217622+ .073598+ 7.19137+	.000000+ .257266+ 140.190+ 2.09099+	.400000+ .074332- 1.00266+ .211939+	.002061 .887365+ 3.07205+ .068899+	2011.5 140.563+ .002064+ 20.0	1.010
39.0100+ .221641+ .081769+ 6.74716+	2.50000+ .266118+ 140.313+ 1.74532+	.400000+ .072231- .864032+ .274573+	.002056 1.08773+ 4.72174+ .058172+	2001.5 125.445+ .002062+ 20.0	1.008
40.0100+ .552367+ .33752+ 14.4672+	2.50000+ .367077+ 140.436+ 9.40267+	.400000+ .026026- 2.16673+ .418972+	.002052 1.52117+ 1.67808+ .249573+	2001.5 304.287+ .002135+ 20.0	1.049
41.0100+ .47752+ .337914+ 14.4563+	.000000+ .331090+ 140.313+ 9.40386+	.400000+ .055763- 2.16672+ .357543+	.002050 1.42651+ 1.43207+ .249694+	2001.5 304.020+ .002134+ 20.0	1.049

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42.0100+ .401896+ .329860+ 14.4625+	2.50000- .315483+ 140.436+ 9.32096+	.400000+ .081492- 2.15006+ .302209+	.002052 1.27390+ 1.21838+ .248041+	2005.5 301.946+ .002134+ 20.0	1.048
43.0100+ .274944+ .166541+ 14.4360+	2.50000- .284616+ 198.983+ 9.31396+	.400000+ .093918- 1.51477+ .235691+	.002024 .966018+ 1.65090+ .142764+	2005.7 301.416+ .002140+ 40.0	1.048
44.0100+ .346825+ .167979+ 14.4565+	.000000+ .296581+ 199.327+ 9.39442+	.400000+ .070497- 1.52523+ .296944+	.002015 1.16940+ 2.06468+ .143820+	2005.7 304.020+ .002137+ 40.0	1.049
45.0100+ .431285+ .167979+ 14.4467+	2.50000+ .325641+ 199.670+ 9.39442+	.400000+ .034991- 1.52261+ .369257+	.002010 1.32441+ 2.56748+ .143820+	2005.7 304.020+ .002138+ 40.0	1.049
46.0100+ .765531+ .622620+ 25.7918+	2.50000+ .419231+ 200.353+ 34.8206+	.400000+ .069576- 2.99904+ .471787+	.001994 1.82603+ 1.22953+ .383713+	2005.7 600.870+ .002246+ 40.0	1.194
47.0100+ .663101+ .590366+ 25.7258+	.000000+ .375642+ 200.524+ 33.0167+	.400000+ .086262- 2.85503+ .416948+	.001992 1.76524+ 1.12320+ .371214+	2005.7 572.503+ .002241+ 40.0	1.177
48.0100+ A .564264+ .590691+ 25.6539+	2.50000- .341026+ 199.194+ 33.0349+	.400000+ .127050- 2.86333+ .354729+	.002020 1.65460+ .955262+ .371342+	2005.7 570.361+ .002257+ 40.0	1.172
49.0100+ 1.02430+ .589791+ 25.6596+	2.50000- .366231+ 141.443+ 16.6658+	.400000+ .171639- 2.02889+ .644299+	.002022 2.79687+ 1.73671+ .370986+	2005.7 286.974+ .002263+ 20.0	1.042
50.0100+ 1.13811+ 1.19187+ 25.6596+	.000000+ .418670+ 140.953+ 33.6790+	.400000+ .143259- 4.11431+ .519243+	.002038 2.71839+ .954897+ .543768+	2005.7 579.927+ .002263+ 20.0	1.174

G.E.M.
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51.0100+	2.50000+	.400000+	.002038	2005.7	
1.21635+	.77076+	.035671-	.54534+	575.144+	
1.18267+	180.953+	4.08038+	1.02048+	.052263+	
25.6655+	33.4191+	.557279+	.541846+	20.0	1.181
61.0100+	2.50000+	.350000+	.002121	2014.2	
.164943+	.243590+	.051012-	.759239+	.000000+	
.000000+	133.135+	.000000+	000000+	.002047+	
.000000+	.000000+	.184943+	.000000+	20.0	1.000
62.0100+	.000000+	.350000+	.002121	2014.2	
.174273+	.224130+	.116595-	.777532+	.000000+	
.000000+	133.135+	.000000+	000000+	.002047+	
.000000+	.000000+	.174273+	.000000+	20.0	1.000
63.0100+	2.50000-	.350000+	.002121	2014.2	
.117365+	.211449+	.147791-	.555062+	.000000+	
.000000+	133.135+	.000000+	000000+	.002047+	
.000000+	.000000+	.117365+	.000000+	20.0	1.000
64.0100+	2.50000-	.350000+	.002121	2014.2	
.107621+	.207692+	.155709-	.519135+	.000000+	
.000000+	194.332+	.000000+	000000+	.002047+	
.000000+	.000000+	.107621+	.000000+	40.0	1.000
65.0100+	.000000+	.350000+	.002121	2014.2	
.176105+	.217949+	.122233-	.802023+	.000000+	
.000000+	194.332+	.000000+	000000+	.002047+	
.000000+	.000000+	.176105+	.000000+	40.0	1.000
66.0100+ C	2.50000+	.350000+	.001984	2007.1	
.222830+	.241360+	.054478-	.421241+	.000000+	
.000000+	200.964+	.000000+	000000+	.002047+	
.000000+	.000000+	.222830+	.000000+	40.0	1.000
67.0100+ A	2.50000+	.350000+	.001982	2007.1	
.258771+	.157692+	.109569-	1.64095+	125.445+	
.036641+	201.042+	.623975+	7.06205+	.002134+	
7.05406+	2.04920+	.249624+	.035346+	40.0	1.008
68.0100+	.000000+	.350000+	.002017	2014.2	
.160000+	.133605+	.092390-	.005050+	106.073+	
.010023+	197.700+	.540561+	6.52470+	.002059+	
7.20650+	1.50650+	.182793+	.020015+	40.0	1.006

G.E.M.
FORCE

69.0100+ .116854+ .036009+ 7.67035+	2.50000- .288827+ 195.045+ 1.96707+	.350000+ .114329- .635620+ .11.792+	.002012 .510666+ 3.244502+ .034755+	2014.2 125.883+ .00.052+ 40.0	1.008
70.0100+ .312981+ .049193+ 6.37161+	2.50000+ .276576+ 141.111+ 1.33006+	.350000+ .038820- .757035+ .296301+	.002024 1.13162+ 6.36230+ .046036+	2014.2 107.337+ .00.042+ 20.0	1.006
71.0100+ .216952+ .049117+ 6.37785+	.000000+ .271202+ 141.146+ 1.330702+	.350000+ .045115- .757031+ .206709+	.002023 .863657+ 4.41702+ .046017+	2014.2 107.430+ .00.038+ 20.0	1.006
72.0100+ .156490+ .049117+ 6.37785+	2.50000- .229361+ 141.146+ 1.330702+	.350000+ .071541- .757031+ 1.14916+	.002023 .653784+ 3.13702+ .046017+	2014.2 107.430+ .00.038+ 20.0	1.006
73.0100+ .433905+ .343373+ 14.5217+	2.50000- .314637+ 141.146+ 9.70201+	.350000+ .050828- 2.11630+ .362997+	.002011 1.37906+ 1.26306+ .255605+	2014.2 307.950+ .00.112+ 20.0	1.050
74.0100+ .910491+ .324820+ 14.5194+	.000000+ .322399+ 141.146+ 9.17053+	.350000+ .028794- 2.07316+ .867250+	.002015 2.73914+ 2.00306+ .245170+	2014.2 293.786+ .00.166+ 20.0	1.049
75.0100+ .604623+ .318139+ 14.5194+	2.50000+ .378072+ 141.146+ 8.96975+	.350000+ .015342- 2.07316+ .456094+	.002027 1.52922+ 1.00042+ .241354+	2014.2 293.282+ .00.096+ 20.0	1.049
76.0100+ A .433082+ .170941+ 14.5194+	2.50000+ .335470+ 201.132+ 9.96003+	.350000+ .027685- 1.51196+ .360060+	.001973 1.29096+ 2.03331+ .145086+	2007.1 305.087+ .00.124+ 40.0	1.050
77.0100+ .352216+ .160551+ 14.5194+	.000000+ .301710+ 200.411+ 8.96975+	.350000+ .046754- 1.44023+ .303490+	.001995 1.16739+ 2.12372+ .126340+	2007.1 298.621+ .00.091+ 40.0	1.046

G.E.M.
FORCE

78.0100+	.50000-	.350000+	.001990	2007.1	
.287523+	.24017+	.052380-	.977911+	307.473+	
.173644+	.00.588+	1.53285+	1.65581+	.002088+	
15.1240+	9.71120+	.244983+	.147953+	40.0	1.049
79.0100+	.50000-	.350000+	.001959	2007.1	
.507393+	.347436+	.112302-	1.74821+	79.229+	
.597945+	.12.061+	.86653+	1.01580+	.002221+	
25.9882+	33.4406+	.380108+	.374190+	40.0	1.174
80.0100+	.000000+	.350000+	.001937	2007.1	
.686462+	.378206+	.089040-	1.81504+	79.707+	
.596185+	.02.400+	.86415+	1.15142+	.002218+	
25.9252+	33.3421+	.430064+	.373500+	40.0	1.175
81.0100+	.50000+	.350000+	.001964	2007.1	
.781704+	.428633+	.049014-	1.82371+	80.915+	
.597427+	.01.892+	.87735+	1.30845+	.002219+	
25.9172+	33.4116+	.489352+	.373993+	40.0	1.176
82.0100+	.50000+	.350000+	.001972	2007.1	
1.24125+	.477875+	.040280-	1.59743+	81.871+	
1.17987+	143.216+	1.06286+	1.05201+	.002214+	
25.8726+	33.3401+	.569415+	.541258+	20.0	1.176
83.0100+	.000000+	.350000+	.001975	2007.1	
1.15234+	.438124+	.084852-	1.63016+	81.871+	
1.17987+	143.096+	1.06629+	.976660+	.002214+	
25.8726+	33.3401+	.528626+	.541258+	20.0	1.176
84.0100+	.50000-	.350000+	.001979	2007.1	
1.03852+	.379764+	.122854-	1.73466+	81.393+	
1.184.02+	142.975+	.066.39+	.000877+	.002218+	
25.9421+	33457.2+	.000876+	.599156+	20.0	1.176
94.0100+	.000000+	.300000+	.002014	2011.3	
.248597+	.257692+	.087550-	.941422+	181.447+	
.061059+	199.428+	.909839+	1.97311+	.002106+	
8.92382+	3.41482+	.228637+	.057546+	40.0	1.017
95.0100+	.50000+	.300000+	.002010	2011.3	
.310824+	.284198+	.047840-	1.03393+	181.447+	
.061110+	199.770+	.903280+	1.02302+	.00.111+	
8.92923+	3.42046+	.292966+	.057535+	40.0	1.017

G.E.M.
FORCE

96.0100+ .161731+ .061424+ 9.34263+	2.50000- .248718+ 199.941+ 3.43520+	.300000+ .119511- .872599+ .152372+	.002005 .650260+ 2.63303+ .057869+	2011.3 174.469+ .002107+ 40.0	1.016
97.0100+ .231179+ .102908+ 8.49739+	2.50000- .264735+ 141.829+ 2.90791+	.300000+ .109997- 1.15016+ .209608+	.002014 .873247+ 2.24645+ .093306+	2011.3 163.126+ .002097+ 20.0	1.014
98.0100+ .305868+ .102908+ 8.49443+	.000000+ .276576+ 141.585+ 2.90791+	.300000+ .085567- 1.15214+ .277328+	.002018 1.10590+ 2.97223+ .093306+	2011.3 163.126+ .002098+ 20.0	1.014
99.0100+ .366330+ .102999+ 8.50650+	2.50000+ .306179+ 141.463+ 2.91048+	.300000+ .038156- 1.15415+ .332122+	.002023 1.19645+ 3.55662+ .093381+	2011.3 163.271+ .002095+ 20.0	1.014
100.010+ .433905+ .328163+ 14.1228+	2.50000- .319712+ 141.000+ 9.27299+	.300000+ .083253- 2.13905+ .326696+	.002035 1.35717+ 1.32222+ .247080+	2009.9 301.606+ .002176+ 20.0	1.049
101.010+ .537047+ .342954+ 14.6121+	.000000+ .334090+ 141.244+ 9.69096+	.300000+ .096547- 2.16384+ .399899+	.002029 1.60748+ 1.56594+ .255373+	2009.9 305.630+ .002169+ 20.0	1.050
102.0100+ .6508589+ .3330293+ 14.37061+	2.500000+ .3755351+ 141.2446+ 9.410500+	.3000000+ .0444905- 2.141059+ .4882555+	.002024 1.733150+ 1.954359+ .2498289+	2009.9 302.4132+ .0021653+ 20.0	1.049
103.0100+ .4762108+ .1659566+ 14.16245+	2.500000+ .3286333+ 199.4285+ 9.281270+	.3000000+ .0394733- 1.513703+ .4084292+	.002014 1.449064+ 2.869488+ .1423352+	2009.9 301.8756+ .0021709+ 40.0	1.049
104.0100+ A .3827657+ .1732358+ 14.76836+	2.500000- .3012828+ 198.7070+ 9.68835+	.3000000+ .0819667- 1.554432+ .3262478+	.002029 1.270453+ 2.209505+ .1476564+	2011.3 308.8765+ .0021238+ 40.0	1.050

G.E.M.
FORCE

105.0100+A .2803354+ .2512553+ 21.34470+	.0000000+ .2320518+ 198.0182+ 14.05167+	.3000000+ .3400501- 1.554394+ .2240433+	.002044 1.208072+ 1.115739+ .2008026+	2011.3 307.7984+ .0021387+ 40.0	1.050
106.0100+ .6595071+ .6077384+ 25.76671+	2.500000- .3418812+ 200.2833+ 33.98829+	.3000000+ .1310523- 2.871452+ .4102079+	.001196 1.929053+ 1.085182+ .3780082+	2001.9 575.1040+ .0022936+ 40.0	1.178
107.0100+ .7619374+ .6081278+ 25.8111+	.0000000+ .3641035+ 200.7944+ 34.01007+	.3000000+ .1262693- 2.868993+ .4738039+	.0019 2.092639+ 1.252923+ .3781589+	2009.9 576.0780+ .0022872+ 40.0	1.178
108.0100+ .8841349+ .6108400+ 25.83326+	2.500000+ .4136762+ 200.7944+ 34.16175+	.3000000+ .0907353- 2.883305+ .5488657+	.001907 2.137262+ 1.447408+ .3792058+	2009.9 578.9517+ .0022841+ 40.0	1.179
109.0100+ 1.404859+ 1.202591+ 25.69730+	2.500000+ .4389701+ 142.1223+ 33.98195+	.3000000+ .1438146- 4.073614+ .6378212+	.002005 3.200353+ 1.168193+ .5459893+	2009.9 578.9517+ .0022841+ 20.0	1.179
110.0100+ 1.205689+ 1.198773+ 25.62353+	.0000000+ .3966801+ 142.1223+ 33.87407+	.3000000+ .1580543- 4.073614+ .5483463+	.002005 3.039450+ 1.005769+ .5452010+	2009.9 578.9517+ .0022834+ 20.0	1.178
111.0100+ 1.070538+ 1.189979+ 25.57405+	2.500000- .3594649+ 142.1223+ 33.62556+	.3000000+ .1679247- 4.041583+ .4888350+	.002005 2.978144+ .8996280+ .5433746+	2009.9 574.3995+ .0022890+ 20.0	1.177
121.0100+ .3917508+ .1682574+ 14.58239+	.0000000+ .3038469+ 199.0855+ 9.409943+	.2500000+ .0672426- 1.540444+ .3353291+	.002011 1.289303+ 2.328281+ .1440243+	2011.3 306.6803+ .0021041+ 40.0	1.049
122.0100+A .6379428+ .5973429+ 26.01851+	2.500000- .3534197+ 202.2224+ 33.40691+	.2500000+ .1032663- 2.878465+ .3993775+	.001011 1.805057+ 1.067967+ .3739603+	2009.2 582.0901+ .0022057+ 40.0	1.175

G.E.M.
FORCE

123.0100+	.000000+	.250000+	.001961	2009.2	
.774516+	.3824796+	.0823175+	2.024987+	586.9409+	
.602972+	202.2224+	2.902452+	1.284497+	.0022071+	
26.03075+	33.72176+	.4831751+	.3761590+	40.0	1.177
124.0100+	2.500000+	.250000+	.001961	2009.2	
.9056991+	.4346165+	.0276334+	2.083904+	588.1535+	
.6025854+	202.2224+	2.908449+	1.503022+	.0022091+	
25.93663+	33.70010+	.5651487+	.3760083+	40.0	1.178
125.0100+	2.500000+	.250000+	.001973	2009.2	
.5211364+	.1914534+	.0225006+	2.722000+	586.9409+	
.6032985+	201.5094+	2.912721+	.8638118+	.0022091+	
26.02097+	33.73996+	.3250401+	.3762856+	20.0	1.177
126.0100+	.000000+	.250000+	.001973	2009.2	
.5696560+	.418000+	.0363004+	2.725954+	586.9409+	
.6032985+	201.5094+	2.912721+	.9442356+	.0022091+	
26.02097+	33.73998+	.355325+	.3762858+	20.0	1.177
127.0100+	2.500000+	.250000+	.001973	2009.2	
.6073934+	.2358980+	.0073458+	2.574813+	586.9409+	
.5990614+	201.5094+	2.912721+	1.013908+	.0021963+	
25.98895+	33.50302+	.3798437+	.3746331+	20.0	1.177
134.0100+	2.500000+	.250000+	.002006	2006.4	
.0995845+	.3467779+	.0137295+	.2871721+	.0000000+	
.0000000+	142.1259+	.0000000+	0000000+	.0020186+	
.0000000+	.0000000+	.0995849+	.0000000+	20.0	1.000
135.0100+	.000000+	.250000+	.002002	2006.4	
.2240662+	.371519+	.0679393+	.6020825+	.0000000+	
.0000000+	142.2476+	.0000000+	0000000+	.0020186+	
.0000000+	.0000000+	.2240662+	.0000000+	20.0	1.000
136.0100+	2.500000+	.250000+	.002002	2006.4	
.3200944+	.4017549+	.1327005+	.7967408+	.0000000+	
.0000000+	142.2476+	.0000000+	0000000+	.0020186+	
.0000000+	.0000000+	.3200945+	.0000000+	20.0	1.000
137.0100+	2.500000+	.250000+	.001983	2004.3	
.2821324+	.2752143+	.0475438+	1.025137+	.0000000+	
.0000000+	201.0068+	.0000000+	0000000+	.0020186+	
.0000000+	.0000000+	.2821324+	.0000000+	40.0	1.000

G.E.M.
FORCE

138.0100+ .203063+ .000000+ .000000+	.000000+ .2525647+ 201.5172+ .000000+	.250000+ .1018019- .000000+ .2030635+	.001971 .0040076+ .000000+ .000000+	2004.3 .000000+ .0020186+ 40.0	1.000
139.0100+ .1024302+ .000000+ .000000+	2.500000- .2388895+ 201.8567+ .000000+	.250000+ .1331372- .000000+ .1024302+	.001965 .4287767+ .000000+ .000000+	2004.3 .000000+ .0020186+ 40.0	1.000
140.0100+ .1132123+ .041978+ 0.133367+	2.500000- .2700861+ 201.8567+ 2.347687+	.250000+ .1135835- .7000017+ .1086513+	.001965 .4191713+ 2.696908+ .0402873+	2004.3 141.3000+ .0020427+ 40.0	1.010
141.0100+ .2354099+ .0396589+ 7.690785+	.000000+ .2807699+ 202.1957+ 2.217961+	.250000+ .0834955- .6994335+ .2264299+	.001953 .8384440+ 5.935856+ .0381461+	2004.3 141.4224+ .0020392+ 40.0	1.010
142.0100+ .3432312+ .0396589+ 7.688095+	2.500000+ .3055563+ 202.3650+ 2.217961+	.250000+ .0365946- .6988485+ .3301382+	.001950 1.123299+ 8.654569+ .0381461+	2004.3 141.4224+ .0020399+ 40.0	1.010
143.0100+ A .3841134+ .0739564+ 7.753357+	2.500000+ .3256329+ 142.8542+ 2.087807+	.250000+ .0629234- .9916889+ .3576620+	.001944 1.179590+ 5.193779+ .0688635+	2004.3 141.6669+ .0020336+ 20.0	1.010
144.0100+ .2062831+ .0702580+ 7.256396+	.000000+ .3027963+ 142.8542+ 1.985317+	.250000+ .044400- .9421045+ .1927414+	.001944 .6812603+ 2.936054+ .0656463+	2004.3 134.5836+ .0020329+ 20.0	1.009

G.E.M.
FORCE

145.0100+	2.500000-	.2500000+	.001984	2004.3	
.1849435+	.0833429+	.0988451-	.6527196+	134.5836+	
.0745450+	142.6542+	.9421045+	2.430861+	.0020321+	
7.702114+	2.106523+	.1721126+	.0693762+	20.0	1.009
146.0100+	2.500000+	.2500000+	.001993	2006.4	
.6437457+	.4009091+	.0074129-	1.605714+	303.0044+	
.3246663+	142.4905+	2.126407+	1.982654+	.0021174+	
14.30015+	9.174823+	.4859599+	.2451057+	20.0	1.048
147.0100+	.0000000+	.2500000+	.001990	2006.4	
.5441007+	.3552359+	.0505050-	1.531829+	303.0044+	
.3296641+	142.6115+	2.124673+	1.650551+	.0021181+	
14.51523+	9.315974+	.4092406+	.2479416+	20.0	1.048
148.0100+	2.500000-	.2500000+	.001990	2006.4	
.4374625+	.3400115+	.0617172-	1.286610+	305.3532+	
.3321355+	142.6115+	2.141148+	1.316707+	.0021181+	
14.51523+	9.388191+	.3283662+	.2493843+	20.0	1.049
149.0100+	2.500000-	.2500000+	.001965	2006.4	
.3238550+	.2991460+	.1033929-	1.099312+	308.8765+	
.1758067+	201.8567+	1.530177+	1.870527+	.0021195+	
15.01820+	9.832251+	.2796841+	.1495215+	40.0	1.050
150.0100+	.0000000+	.2500000+	.001960	2006.4	
.4187061+	.3166674+	.0790746-	1.322226+	305.6191+	
.1761063+	202.0263+	1.512708+	2.375839+	.0021087+	
15.28702+	9.851946+	.3559939+	.1497761+	40.0	1.049
151.0100+	2.500000+	.2500000+	.001953	2006.4	
.4187061+	.3506847+	.0170940-	1.160864+	305.3532+	
.1704112+	202.5341+	1.507663+	2.457022+	.0021123+	
14.77528+	9.530436+	.3577425+	.1456000+	40.0	1.049
155.0100+	5.000000-	.1500000+	.001966	2007.1	
.0287523+	.2829067+	.1416581-	.1016312+	146.9322+	
.0436288+	201.6211+	.7260320+	.5912598+	.0020505+	
9.026378+	2.719616+	.0274189+	.0463738+	40.0	1.011
156.0100+	2.500000-	.1500000+	.001961	2007.1	
.1329796+	.2794879+	.1095715-	.4757974+	140.9322+	
.0420850+	201.9907+	.6977106+	3.164236+	.0020541+	
8.118683+	2.350330+	.1276164+	.0403308+	40.0	1.010

G.E.M.
FORCE

176.0100+A .9887365+ .2969817+ 13.43867+	5.000000+ .4787227+ 142.2225+ 8.391893+	.1500000+ .0959094+ 2.051806+ .7623345+	.002002 2.065363+ 3.329284+ .2289791+	2007.1 291.8131+ .0021399+ 20.0	1.045
177.0100+A .0535855+ .3154486+ 13.95548+	2.500000+ .4135961+ 142.2225+ 8.913719+	.1500000+ .0085719+ 2.089148+ .6488930+	.002002 2.063813+ 2.705941+ .2398031+	2007.1 297.1239+ .0021496+ 20.0	1.043
178.0100+ .6473023+ .3233855+ 14.20395+	.0000000+ .3628481+ 141.9042+ 9.137992+	.1500000+ .029800- 2.115852+ .4891260+	.002011 1.783948+ 2.001643+ .2443622+	2009.2 300.2483+ .0021426+ 20.0	1.048
179.0100+ .4659154+ .3286652+ 14.44075+	2.500000- .3501611+ 142.1474+ 9.287184+	.1500000+ .0495938- 2.112232+ .3506642+	.002004 1.330574+ 1.417598+ .2473649+	2009.2 300.2483+ .0021419+ 20.0	1.043
180.0100+ .3638870+ .3342018+ 14.70984+	5.000000- .3342367+ 142.1474+ 9.443633+	.1500000+ .0824118- 2.115947+ .2772347+	.002004 1.104348+ 1.106777+ .2504882+	2009.2 300.7764+ .0021344+ 20.0	1.048
181.0100+ .2749443+ .1747192+ 15.21207+	5.000000- .3136760+ 200.6948+ 9.771323+	.1500000+ .1113561- 1.497360+ .2340511+	.001988 .8765234+ 1.573635+ .1487327+	2009.2 300.5125+ .0021374+ 40.0	1.048
182.0100+ .3701865+ .1718823+ 14.96000+	2.500000- .3222230+ 201.2053+ 9.612667+	.1500000+ .0787553- 1.493561+ .3158905+	.001976 1.148851+ 2.153720+ .1466720+	2009.2 300.5125+ .0021382+ 40.0	1.048
183.0100+ .5013691+ .1660205+ 14.47232+	.0000000+ .3397444+ 201.3752+ 9.284838+	.1500000+ .0378725- 1.493612+ .4295831+	.001974 1.475724+ 3.019923+ .1423021+	2009.2 300.7764+ .0021330+ 40.0	1.048
184.0100+ .6918535+ .1635385+ 14.22413+	2.500000+ .3790608+ 201.5449+ 9.146033+	.1500000+ .0027602+ 1.491044+ .5946116+	.001972 1.825178+ 4.230522+ .1405527+	2009.2 300.5125+ .0021396+ 40.0	1.048

G.E.M.
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157.0100+	.0000000+	.1500000+	.001961	2007.1	
.2569741+	.2901716+	.0794590-	.8855935+	140.9322+	
.0420258+	201.9907+	.6977166+	6.114672+	.0020541+	
8.118683+	2.350330+	.2466101+	.0403308+	40.0	1.010
158.0100+	2.500000+	.1500000+	.001954	2007.1	
.3863597+	.3230777+	.0114774-	1.195872+	141.0549+	
.0397125+	202.4984+	.6965732+	9.728904+	.0020520+	
7.673107+	2.220959+	.3716024+	.0381957+	40.0	1.010
160.0100+A	5.000000-	.1500000+	.002002	2007.1	
.0391226+	.2808055+	.1148523-	.1393229+	116.9309+	
.0614286+	142.2225+	.8221688+	.6368795+	.0020685+	
7.176295+	1.735807+	.0368585+	.0578735+	20.0	1.007
161.0100+	2.500000-	.1500000+	.001987	2007.1	
.2027265+	.2977215+	.0670964-	.6809266+	146.8044+	
.0818014+	142.7079+	1.028705+	2.478275+	.0020563+	
7.657085+	2.311486+	.1873971+	.0756159+	20.0	1.011
162.0100+	.0000000+	.1500000+	.001987	2007.1	
.2880851+	.318500+	.01530-	.0353803-	117.3412+	
.0575174+	142.7079+	.8221688+	5.008659+	.0020541+	
6.742945+	1.625205+	.2724164+	.0543890+	20.0	1.007
163.0100+	2.500000+	.1500000+	.001987	2007.1	
.4908116+	.332000+	.01385-	1.523078+	117.4435+	
.0576966+	142.7079+	.8221688+	8.506761+	.0020519+	
6.765113+	1.630350+	.4640382+	.0545493+	20.0	1.007
164.0100+	5.000000+	.1500000+	.001991	2007.1	
.5975098+	.3628481+	.0086179-	1.646721+	124.4901+	
.0611584+	142.5867+	.8730838+	9.769865+	.0020534+	
6.760376+	1.728171+	.5630731+	.0576336+	20.0	1.008
165.0100+	5.000000+	.1500000+	.001966	2007.1	
.4869930+	.3504282+	.0127452+	1.389708+	94.03666+	
.0232896+	201.7856+	.4660226+	20.91024+	.0020448+	
6.773605+	1.302495+	.4759092+	.0227596+	40.0	1.005

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FORCE

199.0100+ A	5.000000+	.1500000+	.002016	2004.3	
1.137511+	.521793+	.0950177+	2.179996+	560.2003+	
.5774176+	122.3644+	2.550070+	1.970003+	.002260+	
25.14127+	32.29258+	.7211247+	.3460525+	40.0	1.172
200.0100+ A	2.500000+	.1500000+	.002007	2004.3	
.9021051+	.4501200+	.0153100+	1.269112+	575.3706+	
.000910+	129.2613+	2.278210+	1.501009+	.002273+	
25.19230+	33.61093+	.5034607+	.373386+	40.0	1.178
201.0100+	5.000000+	.1000000+	.002170	2004.3	
2.005324+	.033100+	.068800+	12.54531+	581.1832+	
1.229952+	135.3955+	4.262132+	1.34110+	.002352+	
25.29167+	34.64206+	.5011541+	.5507540+	20.0	1.187
202.0100+	2.500000+	.1000000+	.002159	2004.3	
2.311794+	.045400-	.132900-	28.17797+	582.1892+	
1.227231+	135.0404+	4.254325+	1.065740+	.002355+	
25.20737+	34.67022+	1.037967+	.5510121+	20.0	1.188
203.0100+	.0000000+	.1000000+	.002137	2004.3	
2.742250+	.166800-	.201800-	61.32983-	585.7248+	
1.233100+	127.9202+	4.255035+	2.231340+	.002358+	
25.20400+	34.61606+	1.231605+	.5519933+	20.0	1.190
204.0100+	2.500000-	.1000000+	.002173	2004.3	
2.522747+	.244900-	.256000-	19.28683-	585.2179+	
1.234902+	135.4695+	4.260254+	2.047730+	.002359+	
25.26995+	34.69490+	1.131479+	.552553+	20.0	1.189
205.0100+	5.000000-	.1000000+	.002159	2004.3	
2.157512+	.318000-	.285000-	10.64233-	581.6253+	
12.20727+	135.2404+	4.250643+	1.760145+	.002362+	
25.16563+	34.72047+	1.140171+	.5247399+	20.0	1.188
206.0100+ A	5.000000+	.1000000+	.002098	2022.6	
1.402271+	.3203428+	.0024147-	3.694748+	583.1956+	
.523285+	125.4224+	2.984281+	2.243604+	.0023616+	
25.43237+	35.02796+	.8640759+	.381161+	40.0	1.187
207.0100+ A	2.500000+	.1000000+	.002098	2022.6	
1.274086+	.3453000+	.0730719-	3.689301+	583.1956+	
.6285955+	125.4224+	2.984281+	2.026881+	.0023602+	
25.53981+	35.15474+	.7023236+	.3859740+	40.0	1.187

C.E.M.
FORCE

208.0100+A 1.015317+ .6251905+ 25.57950+	.0000000+ .2892169+ 19.4357+ 34.9431+	.1000000+ .0110405- 2.958949+ .6247375+	.002073 3.509370+ 1.624013+ .3942275+	2022.6 581.8350+ .0023492+ 40.0	1.185
209.0100+A .0458310+ .6209985+ 25.73109+	2.500000- .2707408+ 19.4628+ 35.9193+	.1000000+ .0886111- 2.956459+ .0211138+	.002076 1.691293+ .0727679+ .3563519+	2022.6 580.8345+ .0023559+ 40.0	1.184
210.0100+A .8776453+ .627996+ 25.73345+	5.000000- .2032405+ 19.42809+ 35.12126+	.1000000+ .0903749- 2.942606+ .5392180+	.002064 3.334662+ 1.397145+ .3057481+	2022.6 579.6539+ .0023545+ 40.0	1.183
226.0100+ .9607979+ .1563271+ 13.21090+	5.000000+ .4059839+ 19.42440+ 8.742727+	.1000000+ .0446408+ 1.502635+ .8360538+	.002076 2.381360+ 1.124454+ .1351728+	2022.6 296.3324+ .0022314+ 40.0	1.048
227.0100+ .6950416+ .1574368+ 13.49264+	2.500000+ .3457273+ 19.67720+ 8.904792+	.1000000+ .0253452- 1.486156+ .6039565+	.002067 2.021914+ 4.440138+ .136020+	2022.6 292.8867+ .0022273+ 40.0	1.047
228.0100+ .421601+ .1719661+ 14.43920+	.0000000+ .3054237+ 19.42440+ 9.617356+	.1000000+ .1014277- 1.520330+ .4102350+	.002076 1.573946+ 2.800561+ .1467330+	2022.6 298.6295+ .0022303+ 40.0	1.049
229.0100+ .3414342+ .1714240+ 14.70067+	2.500000- .3021375+ 197.2922+ 9.387036+	.1000000+ .1171702- 1.424527+ .2914693+	.002060 1.130062+ 1.251752+ .1463321+	2022.6 292.8867+ .0022286+ 40.0	1.047
230.0100+ .2677563+ .171231+ 14.49264+	5.000000- .3060307+ 197.4641+ 9.377941+	.1000000+ .1716197- 1.483225+ .2260050+	.002055 .8726276+ 1.562436+ .1462196+	2022.6 292.8867+ .0022251+ 40.0	1.047

G.E.M.
FORCE

231.0100+	2.500000+	.0500000+	.002068	2020.5	
.5512739+	.3002589+	.0248352+	1.835995+	.0000000+	
.0000000+	139.9195+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.5512739+	.0000000+	20.0	1.000
232.0100+	.0000000+	.0500000+	.002068	2020.5	
.1387076+	.2452819+	.0755210-	.5655028+	.0000000+	
.0000000+	139.9195+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.1387076+	.0000000+	20.0	1.000
233.0100+	2.500000-	.0500000+	.002068	2020.5	
.1849435-	.2402071+	.0473081-	.7699334-	.0000000+	
.0000000+	139.9195+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.1849435-	.0000000+	20.0	1.000
234.0100+	2.500000-	.0500000+	.002067	2020.5	
.2066575-	.2401715+	.1577324-	.8604580-	.0000000+	
.0000000+	196.8773+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.2066575-	.0000000+	40.0	1.000
235.0100+	.0000000+	.0500000+	.002067	2020.5	
.1347766+	.1833338-	.2998401-	.7351435-	.0000000+	
.0000000+	196.8773+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.1347766+	.0000000+	40.0	1.000
236.0100+	2.500000+	.0500000+	.002067	2020.5	
.5948143+	.3055563+	.0122189+	1.946660+	.0000000+	
.0000000+	196.8773+	.0000000+	0000000+	.0021476+	
.0000000+	.0000000+	.5948143+	.0000000+	40.0	1.000
237.0100+	2.500000+	.0500000+	.002083	2020.5	
.7331850+	.3106845+	.0123313+	2.359901+	145.7711+	
.0369920+	196.0119+	.7436848+	19.81957+	.0021331+	
6.653334+	2.068863+	.7070299+	.0356733+	40.0	1.011
238.0100+	.0000000+	.0500000+	.002083	2020.5	
.3989380+	.2777785+	.0595613-	1.436176+	145.9019+	
.0419683+	196.0119+	.7443520+	9.505702+	.0021278+	
7.560202+	2.347117+	.3828704+	.0402770+	40.0	1.011
239.0100+	2.500000-	.0500000+	.002074	2020.5	
.2138456+	.2760690+	.0781367-	.7746091+	131.7696+	
.0379032+	196.5316+	.6704757+	5.641876+	.0021325+	
7.543598+	2.119773+	.2060361+	.0365190+	40.0	1.009

G.E.M.
FORCE

240.0100+ .2987549+ .0579801+ 6.661915+	2.500000- .2731933+ 139.4277+ 1.636362+	.0500000+ .0740493- .8297583+ .2823823+	.002079 1.093565+ 5.152707+ .0548027+	2020.5 115.6913+ .0021257+ 20.0	1.007
241.0100+ .473028+ .0662423+ 6.662591+	.0000000+ .2808055+ 139.3045+ 1.871828+	.0500000+ .0438663- .9467611+ .4436408+	.002084 1.684541+ 7.140878+ .0621269+	2020.5 131.8881+ .0021301+ 20.0	1.009
242.0100+ .7682269+ .0618043+ 6.219630+	2.500000+ .3121001+ 139.0577+ 1.746421+	.0500000+ .0120102+ .9492923+ .7235108+	.002093 2.461475+ 12.42999+ .0582068+	2020.5 132.0064+ .0021271+ 20.0	1.009
252.0100+ 4.321276+ 1.238746+ 25.10504+	2.500000+ .3789183+ 138.4146+ 35.00361+	.0500000+ .1104362+ 4.263371+ 1.930221+	.002112 11.40424+ 3.488425+ .5533215+	2021.2 590.1132+ .0023627+ 20.0	1.192
253.0100+ 4.851211+ 1.233669+ 24.88588+	.0000000+ .2334407+ 138.6625+ 34.86013+	.0500000+ .0477742- 4.260615+ 2.171857+	.002105 20.78133+ 3.932342+ .5523062+	2021.2 590.7876+ .0023710+ 20.0	1.194
254.0100+ 4.200352+ 1.238978+ 25.68815+	2.500000- .0727387+ 138.6625+ 35.01014+	.0500000+ .1721816- 4.252093+ 1.876012+	.002102 57.74569+ 3.390174+ .5533677+	2021.2 589.6060+ .0023668+ 20.0	1.192
255.0100+ 2.001882+ .6264358+ 25.26691+	2.500000- .1905987+ 196.1509+ 35.03396+	.0500000+ .0999439- 2.993831+ 1.230840+	.002079 10.50312+ 3.195670+ .3851586+	2021.2 587.2428+ .0023611+ 40.0	1.190
256.0100+ 2.350505+ .6283019+ 25.18000+	.0000000+ .2551288+ 196.3241+ 35.13832+	.0500000+ .0744011- 3.003226+ 1.443531+	.002077 9.213010+ 3.741043+ .3858632+	2021.2 589.6060+ .0023668+ 40.0	1.192
257.0100+ 2.248074+ .6197767+ 25.17085+	2.500000+ .3025648+ 196.6701+ 34.66154+	.0500000+ .0399489+ 2.961896+ 1.387891+	.002073 7.430058+ 3.627232+ .3826309+	2021.2 582.5165+ .0023639+ 40.0	1.191

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258.0100+	2.500000+	.0500000+	.002068	2021.2	
1.128529+	.1997440+	.6045447-	5.947642+	296.2572+	
.3203070+	195.8428+	1.505044+	3.523275+	.0022157+	
27.28910+	17.91344+	.8547481+	.2426004+	40.0	1.048
259.0100+	.0000000+	.0500000+	.002063	2021.2	
.7709229+	.2970093+	.0445527-	2.595617+	295.3892+	
.1584471+	197.0154+	1.502367+	4.865485+	.0022130+	
13.52801+	8.861293+	.6654792+	.1367754+	40.0	1.048
260.0100+	2.500000-	.0500000+	.002063	2021.2	
.5002054+	.2858981+	.0301557-	2.099367+	299.1730+	
.1719468+	197.0154+	1.518529+	3.490644+	.0022215+	
14.46873+	9.616276+	.5121430+	.1467190+	40.0	1.049
261.0100+	2.500000-	.0500000+	.002064	2021.2	
.9460573+	.2418987+	.0265723-	3.910963+	280.5075+	
.3082892+	139.3045+	2.013627+	3.068732+	.0022210+	
13.98230+	8.711413+	.7231254+	.2356430+	20.0	1.043
262.0100+	.0000000+	.0500000+	.002064	2021.2	
1.113217+	.2791139+	.0513051-	3.988396+	293.1533+	
.3176760+	139.3045+	2.104405+	3.504245+	.0022248+	
13.76336+	3.976682+	.8448336+	.2410886+	20.0	1.047
263.0100+	2.500000+	.0500000+	.002081	2021.2	
1.394189+	.3053337+	.0179509-	4.566116+	295.4525+	
.3201684+	139.1812+	2.122790+	4.354550+	.0022248+	
13.76336+	9.047080+	1.056069+	.2425209+	20.0	1.048
264.0100+	5.000000+	.1000000+	.002079	2021.2	
.591220E+	.3371803+	.0493907+	1.753424+	138.9541+	
.0352630+	196.1509+	.7084042+	16.76601+	.0021285+	
6.667595+	1.972113+	.5710022+	.0340618+	40.0	1.010
265.0100+	2.500000+	.1000000+	.002079	2021.2	
.3773746+	.2982913+	.0244813-	1.265120+	122.7428+	
.0331937+	196.1509+	.6257571+	11.36883+	.0021241+	
7.120137+	1.856390+	.3652506+	.0321273+	40.0	1.008
266.0100+	.0000000+	.1000000+	.002073	2021.2	
.2210337+	.2692314+	.0763632-	.8209802+	131.7696+	
.0379032+	196.6701+	.6700036+	5.831519+	.0021332+	
7.540974+	2.119773+	.2129617+	.0365190+	40.0	1.009
267.0100+	2.500000-	.1000000+	.002068	2021.2	
.0988362+	.2606844+	.1197348-	.3791412+	131.7696+	
.0400984+	196.8428+	.6694156+	2.464838+	.0021325+	
7.980486+	2.242540+	.0950258+	.0385525+	40.0	1.009

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268.0100+	5.000000-	.1000000+	.002013	2021.2	
.0179700+	.2696588+	.141997-	.0666405+	138.4552+	
.044593+	197.0154+	.7027633+	.4029809+	.0021424+	
8.407338+	2.493914+	.0172030+	.0426895+	40.0	1.010
269.0100+	5.000000-	.1000000+	.002013	2021.2	
.0746887+	.2824971+	.0894021-	.2043875+	131.0511+	
.0617821+	139.6494+	.9427251+	1.200895+	.0021376+	
6.202869+	1.745808+	.0703427+	.0581876+	20.0	1.009
270.0100+	2.500000-	.1000000+	.002080	2021.2	
.1920567+	.2689643+	.1214925-	.7140601+	131.6511+	
.0752388+	139.4033+	.9443895+	2.552629+	.0021393+	
7.548594+	2.126043+	.1786177+	.0699740+	20.0	1.009
271.0100+	.0000000+	.1000000+	.002080	2021.2	
.2667454+	.2841887+	.0537062-	.9386207+	122.4124+	
.0616176+	139.4033+	.8781170+	4.329044+	.0021363+	
6.657826+	1.741146+	.2512632+	.0580412+	20.0	1.008
272.0100+	2.500000+	.1000000+	.002085	2021.2	
.4694720+	.2943383+	.0406601-	1.595007+	131.6511+	
.0662680+	139.2801+	.9452253+	7.084443+	.0021393+	
6.648570+	1.872553+	.4402945+	.0621494+	20.0	1.009
273.0100+	5.000000+	.1000000+	.002085	2021.2	
.7148778+	.3518527+	.0617822+	2.031752+	138.8296+	
.0703391+	139.2801+	.9967651+	10.16330+	.0021338+	
6.709239+	1.987591+	.6670984+	.0657166+	20.0	1.010
274.0100+	5.000000+	.1000000+	.002085	2021.2	
1.148783+	.4051381+	.0404462+	2.835536+	298.9014+	
.3245628+	139.2801+	2.146044+	3.539480+	.0022278+	
13.77270+	9.171261+	.8672928+	.2450330+	20.0	1.049
275.0100+	2.500000+	.1000000+	.002085	2021.2	
.8322458+	.3552359+	.0524744-	2.342797+	295.4525+	
.3253630+	139.2801+	2.121282+	2.557692+	.0022248+	
13.98670+	9.193896+	.6279376+	.2454982+	20.0	1.048
276.0100+	.0000000+	.1000000+	.002089	2021.2	
.6010664+	.3205581+	.0807479-	1.875062+	298.9014+	
.3344180+	139.1568+	2.147948+	1.797350+	.0022248+	
14.21004+	9.449741+	.4504334+	.2506096+	20.0	1.049

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277.0100+	2.500000-	.1000000+	.002080	2021.2	
.4303493+	.3146375+	.0727784-	1.367762+	295.4525+	
.3344559+	139.1560+	2.123162+	1.286714+	.0022240+	
14.36240+	9.450812+	.3224905+	.2506309+	20.0	1.048
278.0100+	5.000000-	.1000000+	.002089	2021.2	
.4623587+	.3036421+	.0191006-	1.522700+	298.4515+	
.3383602+	139.1550+	2.147946+	1.366469+	.0022246+	
14.37754+	9.561132+	.3454666+	.2528169+	20.0	1.049
279.0100+	2.500000+	.0300000+	.002079	2021.2	
.9775800+	.3324795+	.0413009+	2.940271+	132.3608+	
.0290327+	196.1503+	.6747907+	33.67163+	.0021179+	
5.791991+	1.623681+	.9499989+	.0282136+	40.0	1.009
280.0100+	.0000000+	.0300000+	.002068	2021.2	
.5660119+	.2598297+	.0344377-	2.178582+	132.2428+	
.0312833+	196.3424+	.6718193+	18.09467+	.0021187+	
6.24409+	1.749547+	.5488900+	.0303343+	40.0	1.009
281.0100+	2.500000-	.0300000+	.002068	2021.2	
.3863597+	.2815391+	.0257255-	1.477254+	116.0024+	
.0293097+	196.8422+	.5893151+	13.18201+	.0021158+	
6.675453+	1.639165+	.3753581+	.0284750+	40.0	1.007
282.0100+	2.500000-	.0300000+	.002080	2021.2	
.6366307+	.2478193+	.0168049-	2.568937+	146.1631+	
.0782313+	139.4033+	1.048490+	8.137821+	.0021224+	
7.125805+	2.210604+	.5204415+	.0755552+	20.0	1.011
283.0100+	.0000000+	.0300000+	.002085	2021.2	
.7291045+	.2596605+	.0271729-	2.807912+	132.4247+	
.062004+	139.2801+	.9486254+	11.75882+	.0021247+	
6.241062+	1.752008+	.6865357+	.0583847+	20.0	1.009
284.0100+	2.500000+	.0300000+	.002085	2021.2	
1.006519+	.2934925+	.0210081+	3.429455+	146.0325+	
.068531+	139.2801+	1.048430+	14.68691+	.0021292+	
6.228077+	1.936519+	.9419651+	.0641363+	20.0	1.011
291.0100+CHK.	2.500000+	.0300000+	.002113	2022.6	
1.636035+	.2706559+	.1032644+	6.044717+	299.1730+	
.3179527+	139.3667+	2.162182+	7.145537+	.0022252+	
13.49537+	9.96448+	1.241344+	.2412475+	20.0	1.049

G.E.M.
FORCE

292.0100+CHK. 1.888557+ .3123632+ 13.25366+	.0000000+ .2545857+ 138.4901+ 8.826533+	.0300000+ .0117267- 2.160247+ 1.132051+	.002108 7.418159+ 8.016031+ 2.220158+	2022.6 299.1730+ .0022260+ 20.0	1.049
293.0100+CHK. 1.554236+ .3255153+ 13.20242+	2.500000- .2224453+ 138.6140+ 9.192177+	.0300000+ .0742693- 2.158317+ 1.172555+	.002106 6.987049+ 4.774695+ .2455764+	2022.6 299.1730+ .0022275+ 20.0	1.049
294.0100+ 1.268697+ .1578256+ 13.25366+	2.500000+ .2670947+ 196.4284+ 8.826533+	.0300000+ .0436617+ 1.523063+ 1.025758+	.002076 4.749991+ 8.038602+ .1363120+	2022.6 299.1730+ .0022260+ 40.0	1.049
295.0100+ 1.130326+ .1560045+ 13.26703+	.0000000+ .2632485+ 196.2554+ 8.724689+	.0300000+ .0293766- 1.506816+ .9777576+	.002079 4.293763+ 7.245473+ .1349515+	2022.6 295.7210+ .0022237+ 40.0	1.048
296.0100+ .9003081+ .1587662+ 13.78373+	2.500000- .2465813+ 196.0823+ 8.870135+	.0300000+ .0341482- 1.478805+ .7769540+	.002081 3.651153+ 5.670653+ .1370131+	2022.6 289.9677+ .0022215+ 40.0	1.046
297.0100+A 3.232842+ .6274876+ 24.65151+	2.500000+ .3423085+ 196.6701+ 35.02078+	.0300000+ .1314657+ 3.039999+ 1.926100+	.002073 9.444235+ 5.152042+ .3855560+	2021.2 597.8770+ .0023810+ 40.0	1.199
298.0100+A 3.960636+ .6167703+ 24.09273+	.0000000+ .2350433+ 197.0154+ 34.40340+	.0300000+ .0081052+ 3.044042+ 2.440721+	.002063 16.85066+ 6.421574+ .3814829+	2021.2 599.7234+ .0023872+ 40.0	1.200
299.0100+A 3.272377+ .6357877+ 24.99250+	2.500000- .1260687+ 197.1879+ 35.55697+	.0300000+ .1302107- 3.032016+ 2.000490+	.002059 25.95709+ 5.146964+ .3886737+	2021.2 597.8770+ .0023795+ 40.0	1.199
300.0100+ 6.494363+ 1.254486+ 24.78024+	2.500000- .0524395- 139.6494+ 35.44836+	.0300000+ .2031339- 4.301889+ 2.880639+	.002076 123.8446- 5.176909+ .5564400+	2021.2 600.7565+ .0023811+ 40.0	1.200

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301.0100+	.0000000+	.0300000+	.002071	2021.2	
7.884996+	.0072209+	.0059408+	38.05114+	109.0346+	
1.251022+	139.5264+	4.365011+	6.302840+	.0023925+	
24.26033+	35.35049+	3.502850+	.5557574+	20.0	1.207
302.0100+	.0000000+	.0300000+	.002080	2021.2	
6.192051+	.0021991+	.0033670+	10.77126+	100.7565+	
1.249204+	139.4033+	4.309483+	4.956796+	.0023804+	
24.68325+	35.29911+	2.752996+	.5553983+	20.0	1.200
306.0100+	.0000000+	.0100000+	0.002101	2021.2	
.4125663+	.236200+	.019200+	1.157943+	.0000000+	
.0000000+	138.7062+	.0000000+	0000000+	.0020231+	
.0000000+	.0000000+	.4125663+	.0000000+	20.0	1.000
307.0100+	.0000000+	.0100000+	0.002100	2021.2	
.4312853+	.231000+	.031300+	1.230737+	.0000000+	
.0000000+	195.2826+	.0000000+	0000000+	.0020231+	
.0000000+	.0000000+	.4312853+	.0000000+	40.0	1.000
308.0100+	.0000000+	.0100000+	0.002068	2021.2	
.8266302+	.2861544+	.0100129+	3.350176+	139.1992+	
.0305648+	196.8428+	.7096993+	27.04515+	.0021074+	
5.806206+	1.709363+	.8021137+	.0296583+	40.0	1.010
309.0100+	.0000000+	.0100000+	0.002101	2021.2	
1.006519+	.2312865+	.0314338+	4.296104+	132.5965+	
.0575629+	139.4033+	.9511720+	17.48553+	.0021111+	
5.810622+	1.626573+	.9517349+	.0544296+	20.0	1.009
312.0100+	.0000000+	.0100000+	.002104	2021.2	
3.161823+	.2402071+	.0096125+	13.16289+	795.1838+	
.2491533+	139.6625+	2.128793+	12.69024+	.0022371+	
10.66130+	7.040409+	2.531171+	.1994581+	20.0	1.048
313.0100+	.0000000+	.0100000+	.002079	2021.2	
1.876091+	.2414536+	.0004962+	7.759985+	795.1838+	
.1257243+	196.1509+	1.504880+	14.92225+	.0022356+	
10.65458+	7.031242+	1.666563+	.1116830+	40.0	1.048
314.0100+	.0000000+	.0100000+	.002068	2021.2	
6.560927+	.2405133+	.0094080+	19.75296+	795.9611+	
.6215667+	196.8428+	3.205405+	10.55546+	.0024357+	
22.61892+	34.76164+	4.046042+	.3833124+	40.0	1.225
315.0100+	.0000000+	.0100000+	.002071	2021.2	
12.63641+	.1769217+	.103374+	7.77017+	795.9611+	
1.231571+	139.5264+	4.522161+	10.30100+	.0024399+	
22.60485+	34.30083+	5.684970+	.5718852+	20.0	1.226

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with
A SLOT TO DIAMETER RATIO OF ONE PER CENT
AND A JET CONVERGENCE ANGLE OF 30°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP	
C_L	C_D	C_M	L/D	V_J	
C_{μ}	V_o	V_J/V_o	C_L/C_{μ}	ρ_1	
Q	mV_J	C_L'	C_{μ}'	i	P_M/P_o

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

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317.0190+ A	.0000000+	.0100000+	.002071	2014.2	
.5050381+	.335155+	.0170526-	.117421+	.0000000+	
.0000000+	133.7713+	.0000000+	0000000+	.0020766+	1.000
.0000000+	.0000000+	.5030381+	.0000000+	20.0	
318.0130+ A	.0000000+	.0100000+	.002070	2014.2	
.5211364+	.127356+	.0139490-	.146929+	.0000000+	
.0000000+	196.6687+	.0000000+	0000000+	.0020756+	1.000
.0000000+	.0000000+	.5211364+	.0000000+	40.0	
319.0130+ A	.0000000+	.0100000+	.002070	2014.2	
.8305403+	.58382+	.0103745+	.138386+	137.8318+	
.0267013+	196.6687+	.6754091+	32.97668+	.0020953+	1.009
5.362715+	1.193327+	.8576402+	.0260074+	40.0	
320.0130+ A	.0000000+	.0100000+	.002077	2014.2	
1.166566+	.379689+	.0193157+	.12120+	110.1937+	
.0557764+	133.5245+	1.004796+	20.91502+	.0020882+	1.010
5.383686+	1.576091+	1.104937+	.0528298+	20.0	
323.0130+ A	.0000000+	.0100000+	.002098	2014.2	
3.624181+	.12023+	.0891327+	14.42732+	300.7975+	
.1380226+	133.9055+	2.165478+	18.30185+	.0022035+	1.049
8.442104+	5.595581+	3.025136+	.1652912+	20.0	

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324.0130+ A 2.134862+ .043865+ 8.450628+	.0000000+ .2350433+ 196.6687+ 5.59	.0100000+ .0417589+ .6706104+ 1.935	.002070 2.062845+ 48.66377+ .0912	2014.2 131.8881+ .0022013+ 40.0	1.048
325.0130+ A 1.01511+ .055451+ 20.12641+	.0000000+ .2299151+ 127.1665+ 32.74077+	.0100000+ .1041421+ 3.33731+ 5.05310+	.002061 31.56720+ 13.69333+ .374579+	2014.2 131.0855+ .0024715+ 40.0	1.248
326.0130+ A 15.48602+ 1.171429+ 20.06940+	.0000000+ .2114492+ 139.7712+ 33.10338+	.0100000+ .2298735+ 4.81758+ 7.135063+	.002071 13.25146+ 13.2713+ 5.551007+	2014.2 131.3601+ .0024475+ 20.0	1.257
328.0130+ .751286+ .035173+ 5.833908+	.0000000+ .309405+ 19.1607+ 1.706706+	.0300000+ .0030496+ .7135967+ .0234933+	.002073 5.075519+ 31.19136+ .0096135+	2014.9 130.1937+ .0020657+ 40.0	1.010
329.0130+ .0540019+ .032577+ 6.282568+	.0000000+ .1700771+ 13.1077+ 1.837322+	.0300000+ .0035930+ .7183313+ .0365990+	.002068 2.051273+ 16.0037+ .0515070+	2014.9 130.1937+ .0020657+ 40.0	1.010
330.0130+ .300127+ .031187+ 6.270068+	.0000000+ .181067+ 19.1007+ 1.743918+	.0300000+ .0370008+ .6761265+ .0700847+	.002068 1.190621+ 12.52274+ .0300397+	2014.9 133.1667+ .0020657+ 40.0	1.009
331.0130+ .012916+ .0617157+ 6.273693+	.0000000+ .106476+ 139.5000+ 1.743918+	.0300000+ .0161092+ .0538853+ .0230217+	.002078 2.57778+ 10.04470+ .0511783+	2014.9 133.0667+ .0020657+ 20.0	1.009
332.0130+ .001129+ .000660+ 6.268731+	.0000000+ .177307+ 135.5000+ 1.836430+	.0300000+ .0300970+ 1.003201+ .7757303+	.002078 2.796394+ 12.69095+ .0410061+	2014.9 131.0467+ .0020955+ 20.0	1.010
333.0130+ 1.032240+ .062504+ 5.811343+	.0000000+ .3033337+ 139.3767+ 1.774686+	.0300000+ .0312851+ 1.04592+ .9770282+	.002083 3.403620+ 16.54720+ .0550932+	2014.9 147.7775+ .0020948+ 20.0	1.011

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340.0130+CHK.	2.500000+	.0300000+	.002094	2014.9	
1.917010+	.283342+	.0961321+	6.765690+	298.2156+	
.265806+	139.0053+	2.145353+	7.212001+	.0022015+	
11.44021+	7.51095+	1.51445+	.2099896+	20.0	1.048

341.0130+CHK.	.0000000+	.0300000+	.002094	2014.9	
2.148190+	.258814+	.007148+	6.300101+	298.4836+	
.258172+	139.0053+	2.147201+	7.32077+	.0022005+	
11.1066+	7.29523+	1.70738+	.2051961+	20.0	1.049

342.0130+CHK.	2.500000-	.0300000+	.002099	2014.9	
1.83520+	.222445+	.0353613-	6.250151+	298.4836+	
.2722780+	138.8811+	2.149191+	5.74020+	.0021930+	
11.7213+	7.69383+	1.44245+	.214008+	20.0	1.049

343.0130+	2.500000-	.0300000+	.002062	2014.9	
1.11864+	.2457271+	.010574-	4.55239+	286.3989+	
.128980+	197.1537+	1.45260+	3.67299+	.0022018+	
11.43892+	7.21334+	.9908461+	.1142450+	40.0	1.047

344.0130+	.0000000+	.0300000+	.002068	2014.9	
1.297451+	.280342+	.007208-	4.628087+	286.3989+	
.125004+	196.8075+	1.455225+	10.3792+	.0022055+	
11.06761+	6.990961+	1.15328+	.1111146+	40.0	1.048

345.0130+	2.500000+	.0300000+	.002073	2014.9	
1.374721+	.276069+	.0774051+	4.979630+	286.3989+	
.125004+	196.4607+	1.45779+	10.9973+	.0022032+	
11.07882+	6.990981+	1.22197+	.1111146+	40.0	1.048

346.0130+	2.500000-	.0300000+	.002048	2014.9	
4.120571+	.1025643+	.1428911-	10.17547+	334.8569+	
.6148283+	197.8443+	3.208871+	5.701907+	.0024099+	
22.4736+	34.38480+	2.55170+	.3807391+	40.0	1.226

347.0130+	.0000000+	.0300000+	.002044	2014.9	
1.86071+	.239744+	.016485+	20.3579+	337.7737+	
.598526+	198.0165+	3.22080+	6.15519+	.0024087+	
21.78122+	22.47321+	3.22080+	.3807391+	40.0	1.226

348.0130+	2.500000+	.0300000+	.002044	2014.9	
4.311056+	.3811975+	.1231228+	11.30924+	638.8593+	
.594	198.0165+	3.226292+	7.25	.0024026+	
22.25822+	33.0	2.71	.372	40.0	1.228

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349.0130+	2.500000+	.0300000+	.002058	2014.9	
8.020147+	.5142463+	.2549454+	15.59592+	637.6696+	
1.197009+	140.2388+	4.547026+	6.700155+	.0023998+	
22.10305+	33.82421+	3.650484+	.5448357+	20.0	1.226
350.0130+	.0000000+	.0300000+	.002063	2014.9	
9.392997+	.2182163+	.0613045+	43.04441+	637.6696+	
1.175984+	140.1159+	4.551013+	7.987348+	.0024012+	
21.70215+	33.23011+	4.316665+	.5404378+	20.0	1.226
351.0130+	2.500000-	.0300000+	.002063	2014.9	
8.222873+	.1006501-	.1977598-	81.69754-	638.8593+	
1.202753+	140.1159+	4.559504+	6.836710+	.0024054+	
22.11609+	33.98652+	3.732998+	.5460226+	20.0	1.228
355.0130+	2.500000+	.0500000+	.002054	2014.9	
.5619438+	.2988757+	.0210467+	1.892858+	.0000000+	
.0000000+	140.3615+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.5619438+	.0000000+	20.0	1.000
356.0130+	.0000000+	.0500000+	.002054	2014.9	
.1422642+	.2418987+	.0859772-	.5881148+	.0000000+	
.0000000+	140.3615+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.1422642+	.0000000+	20.0	1.000
357.0130+	2.500000-	.0500000+	.002054	2014.9	
.1920567-	.2452819+	.1761943-	.7830038-	.0000000+	
.0000000+	140.3615+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.1920567-	.0000000+	20.0	1.000
358.0130+	2.500000-	.0500000+	.002054	2014.9	
.1994694-	.2431630+	.1760098-	.8203116-	.0000000+	
.0000000+	197.4993+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.1994694-	.0000000+	40.0	1.000
359.0130+	.0000000+	.0500000+	.002054	2014.9	
.1671230+	.2470091+	.0830271-	.6765864+	.0000000+	
.0000000+	197.4993+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.1671230+	.0000000+	40.0	1.000
360.0130+	2.500000+	.0500000+	.002054	2014.9	
.6002054+	.3055563+	.0012270+	1.964303+	.0000000+	
.0000000+	197.4993+	.0000000+	0000000+	.0020736+	
.0000000+	.0000000+	.6002054+	.0000000+	40.0	1.000

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361.0130+	2.500000+	.0500000+	.002034	2014.9	
.7335761+	.3081204+	.0021959-	2.397036+	140.0703+	
.0304904+	197.4993+	.7092191+	24.22320+	.0020897+	
5.825666+	1.705203+	.7167229+	.0295882+	40.0	1.010
362.0130+	.0000000+	.0500000+	.002034	2014.9	
.4672257+	.2863255+	.0564324-	1.631799+	140.0703+	
.0351573+	197.4993+	.7092191+	13.28956+	.0020897+	
6.717349+	1.966204+	.4513572+	.0339632+	40.0	1.010
363.0130+	2.500000-	.0500000+	.002044	2014.9	
.2066575+	.2722229+	.1045630-	.7591482+	132.5965+	
.0355640+	198.0165+	.6696236+	5.810856+	.0021001+	
7.142340+	1.988948+	.1995603+	.0343446+	40.0	1.009
364.0130+	2.500000-	.0500000+	.002053	2014.9	
.4303493+	.2799597+	.1038003-	1.537182+	145.1325+	
.0725754+	140.1159+	1.035802+	5.929676+	.0021135+	
6.685721+	2.050785+	.4012299+	.0676646+	20.0	1.001
365.0130+	.0000000+	.0500000+	.002057	2014.9	
.6259627+	.2994131+	.0606490-	2.090631+	132.5965+	
.0616434+	139.9930+	.9471658+	10.15457+	.0021038+	
6.244195+	1.741874+	.5896167+	.0580641+	20.0	1.009
366.0130+	2.500000+	.0500000+	.002057	2014.9	
.8855949+	.3053337+	.0161531-	2.900416+	132.5965+	
.0572715+	139.9930+	.9471658+	15.46309+	.0021030+	
5.803367+	1.618337+	.8376230+	.0541691+	20.0	1.009
373.0130+	2.500000-	.0500000+	.002094	2014.9	
1.276821+	.2630895+	.0238453-	4.838469+	316.1394+	
.3064511+	139.0053+	2.274296+	4.166477+	.0022184+	
12.34705+	8.659473+	.9773206+	.2345676+	20.0	1.054
374.0130+	.0000000+	.0500000+	.002097	2014.9	
1.522227+	.2774223+	.0378177-	5.487039+	318.4470+	
.3090370+	139.2529+	2.286824+	4.925697+	.0022206+	
12.34861+	8.732570+	1.162859+	.2360802+	20.0	1.055

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375.0130+	2.500000+	.0500000+	.002087	2014.9	
1.700057+	.2892635+	.0483312-	5.877192+	318.4470+	
.3090379+	139.2529+	2.286824+	5.501129+	.0022199+	1.055
12.35275+	8.732570+	1.298707+	.2360802+	20.0	
376.0130+	2.500000+	.0500000+	.002066	2014.9	
1.331593+	.3165821+	.0257548+	3.842072+	315.2698+	
.1460091+	195.9807+	1.00511+	9.119932+	.0022137+	1.054
11.70010+	8.165685+	1.161939+	.1274065+	40.0	
377.0130+	.0000000+	.0500000+	.002062	2014.9	
1.051257+	.3029922+	.0354167-	3.469587+	309.4956+	
.1433349+	127.1537+	1.569818+	7.334274+	.0022129+	1.052
11.70403+	8.016130+	.9194663+	.1253656+	40.0	
378.0130+	2.500000-	.0500000+	.002050	2014.9	
.7942838+	.2816246+	.0322352-	2.820363+	308.3408+	
.1506764+	127.6719+	1.559861+	5.271554+	.0022114+	1.053
12.35789+	8.426706+	.6902755+	.1309459+	40.0	
379.0130+	2.500000-	.0500000+	.002073	2014.9	
2.663186+	.1730602+	.1056930-	14.87312+	625.1560+	
.5950189+	196.4607+	3.132091+	4.475801+	.0024270+	1.220
21.93218+	33.27694+	1.669689+	.3730481+	40.0	
380.0130+	.0000000+	.0500000+	.002057	2014.9	
3.229248+	.2729921+	.0225297-	12.76422+	633.2298+	
.5988354+	127.3266+	3.209044+	5.392547+	.0024216+	1.220
21.83935+	33.49038+	2.019750+	.3745447+	40.0	
381.0130+	2.500000+	.0500000+	.002053	2014.9	
3.027982+	.3431632+	.0935850+	8.823736+	627.3117+	
.5918454+	127.4993+	3.176272+	5.116170+	.0024153+	1.222
21.84552+	33.09946+	1.902183+	.3717983+	40.0	
382.0130+	2.500000+	.0500000+	.002069	2014.9	
5.893296+	.4050403+	.1574899+	12.95115+	633.7726+	
1.186907+	130.8699+	4.531157+	4.965252+	.0024203+	1.226
21.86409+	33.53877+	2.694808+	.5427333+	20.0	
383.0130+	.0000000+	.0500000+	.002072	2014.9	
6.374438+	.2452819+	.0339231+	25.98412+	630.2188+	
1.163628+	139.7467+	4.509720+	5.477808+	.0024140+	1.223
21.61894+	32.88998+	2.945717+	.5370135+	20.0	
384.0130+	2.500000-	.0500000+	.002077	2014.9	
5.534079+	.0194533+	.1726388-	284.4700+	616.0033+	
1.142797+	139.7467+	4.407997+	4.842571+	.0024118+	1.222
21.73495+	32.29234+	2.582642+	.5333204+	20.0	

**G.E.M.
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388.0130+	5.000000+	.1000000+	..002064	2013.5	
.5732500+	.3453000+	.0522249+	1.660150+	133.0667+	
.0288920+	197.0499+	.6752946+	19.84111+	.0020867+	
5.818911+	1.615811+	.5571528+	.0280807+	40.0	1.009
389.0130+	2.500000+	.1000000+	.002055	2013.5	
.4294883+	.3076931+	.0011148-	1.395833+	132.8318+	
.0311276+	197.3959+	.6729210+	13.79764+	.0020956+	
6.253742+	1.740840+	.4165229+	.0301879+	40.0	1.010
390.0130+	.0000000+	.1000000+	.002055	2013.5	
.2461920+	.2696588+	.0724787-	.9129760+	132.7142+	
.0333109+	197.3959+	.6723252+	7.390713+	.0020942+	
6.702820+	1.862946+	.2382555+	.0322371+	40.0	1.008
391.0130+	2.500000-	.1000000+	.002049	2013.5	
.1150094+	.2636759+	.1223972-	.4361772+	132.4787+	
.0355324+	197.7413+	.6699598+	3.236744+	.0021024+	
7.134634+	1.987181+	.1110630+	.0343132+	40.0	1.009
392.0130+	5.000000-	.1000000+	.002046	2013.5	
.0215642+	.2662400+	.1348586-	.0809955+	132.2428+	
.0355425+	197.9138+	.6681838+	.6067162+	.0021099+	
7.123963+	1.987749+	.0208241+	.0343226+	40.0	1.009
393.0130+	5.000000-	.1000000+	.002138	2014.2	
.1031415+	.2655811+	.1086856-	.3883618+	132.2428+	
.0659844+	137.5589+	.9613538+	1.563118+	.0021136+	
6.670745+	1.864541+	.0967571+	.0619000+	20.0	1.009
394.0130+	2.500000-	.1000000+	..002124	2014.2	
.1813869+	.2689643+	.1041179-	.6743901+	131.7696+	
.0660380+	138.0591+	.9544435+	2.746703+	.0021273+	
6.656916+	1.866055+	.1701505+	.0619471+	20.0	1.009
395.0130+	.0000000+	.1000000+	..002126	2014.2	
.3485474+	.2867261+	.0490878-	1.215610+	139.0786+	
.0695481+	137.9342+	1.008296+	5.011597+	.0021188+	
6.668850+	1.965241+	.3258828+	.0650257+	20.0	1.010

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396.0130+	2.500000+	.1000000+	.002126	2014.2	
.5583872+	.3205581+	.0025483+	1.741921+	139.2029+	
.0648676+	137.9342+	1.009197+	8.608097+	.0021150+	
6.225606+	1.832983+	.5243723+	.0607161+	20.0	1.010
397.0130+	5.000000+	.1000000+	.002111	2014.2	
.5903966+	.3323993+	.0522372+	1.776166+	116.3127+	
.0501103+	138.3086+	.8409856+	11.78193+	.0021001+	
5.796682+	1.415981+	.5622234+	.0477191+	20.0	1.007
398.0130+	5.000000+	.1000000+	.002111	2014.2	
1.298161+	.4457365+	.1028472+	2.912395+	295.7210+	
.2645577+	138.4331+	2.136200+	4.906910+	.0022192+	
11.39079+	7.475681+	1.026573+	.2092097+	20.0	1.048
399.0130+	2.500000+	.1000000+	.002106	2014.2	
1.138114+	.3839931+	.0302730+	2.363891+	295.9892+	
.2706532+	138.5575+	2.136218+	4.205064+	.0022152+	
11.66380+	7.647921+	.8956921+	.2130032+	20.0	1.048
400.0130+	.0000000+	.1000000+	.002104	2014.2	
.8820383+	.3433947+	.027300-	2.568584+	295.7210+	
.2707329+	138.6819+	2.136218+	3.257964+	.0022177+	
11.66454+	7.650174+	.6941178+	.2130525+	20.0	1.048
401.0130+	2.500000-	.1000000+	.002104	2014.2	
.6615287+	.3197123+	.0823274-	2.069137+	293.4197+	
.2683035+	138.6819+	2.115774+	2.465597+	.0022162+	
11.65841+	7.581527+	.5215055+	.2115452+	20.0	1.047
402.0130+	5.000000-	.1000000+	.002104	2014.2	
.5085947+	.2799597+	.0913406-	1.816670+	293.4197+	
.2763655+	138.6819+	2.115774+	1.840296+	.0022155+	
12.01279+	7.809338+	.3984710+	.2165254+	20.0	1.047
403.0130+	5.000000-	.1000000+	.002066	2014.2	
.3252610+	.2803426+	.1012976-	1.160226+	290.2307+	
.1377973+	196.9807+	1.473356+	2.360429+	.0022077+	
12.02683+	7.706436+	.2058690+	.1211089+	40.0	1.046
404.0130+	2.500000-	.1000000+	.002057	2014.2	
.4667478+	.2915310+	.0780252-	1.601022+	290.2307+	
.1394262+	196.2853+	1.478616+	3.347633+	.0022100+	
12.02868+	7.715450+	.4096341+	.1223652+	40.0	1.046

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405.0130+	.0000000+	.1000000+	.002017	2014.2	
.6577101+	.3153874+	.0055613-	2.053416+	295.9692+	
.1355867+	197.3236+	1.493916+	4.515329+	.0022122+	
11.66553+	7.635729+	.5786712+	.1201727+	40.0	1.048
406.0130+	2.500000+	.1000000+	.002053	2014.2	
.0041349+	.304558+	.0060915+	2.422504+	290.2307+	
.1308672+	197.4993+	1.469527+	6.755968+	.0022107+	
11.40052+	7.318861+	.7818202+	.1157228+	20.0	1.046
407.0130+	5.000000+	.1000000+	.002010	2014.2	
1.072022+	.4295156+	.0923777+	2.493444+	295.9832+	
.1295130+	197.6719+	1.497375+	8.283122+	.0022137+	
11.05443+	7.243454+	.9498044+	.1146674+	40.0	1.048
408.0130+	5.000000+	.1000000+	.002041	2017.0	
1.66583+	.3521376+	.0762411+	4.730648+	629.9960+	
.6034738+	197.3123+	3.183207+	2.760417+	.0023933+	
22.38317+	33.74978+	1.038894+	.3763540+	40.0	1.220
409.0130+	2.500000+	.1000000+	.002039	2017.0	
1.732517+	.3431632+	.0362170-	5.069066+	631.0665+	
.6002940+	198.2562+	3.183085+	2.397777+	.0023852+	
22.30307+	33.57195+	1.086993+	.3751148+	40.0	1.220
410.0130+	.0000000+	.1000000+	.002039	2017.0	
1.507701+	.3017101+	.0751386-	4.957184+	631.0665+	
.6034470+	198.2563+	3.183085+	2.498473+	.0023838+	
22.43340+	33.74834+	.9402872+	.3763439+	40.0	1.220
411.0130+	2.500000-	.1000000+	.002032	2017.0	
1.344178+	.2596588+	.0726075-	4.984715+	631.0665+	
.6034479+	198.5995+	3.177583+	2.227487+	.0023838+	
22.43340+	33.74834+	.8383013+	.3763439+	40.0	1.220
412.0130+	5.000000-	.1000000+	.002028	2017.0	
1.241748+	.2589921+	.1032607-	4.902225+	631.0665+	
.6034472+	198.7360+	3.175399+	2.057745+	.0023838+	
22.43340+	33.74834+	.7744200+	.3763439+	40.0	1.220
413.0130+	5.000000-	.1000000+	.002035	2017.0	
1.767033+	.0396547+	.2133043-	30.86326+	632.7228+	
1.192027+	140.2876+	4.510679+	2.321282+	.0023854+	
22.31465+	33.68344+	1.262319+	.5438013+	20.0	1.222

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414.0130+	2.500000-	.1000000+	.002055	2017.0	
3.09331+	.110701+	.144197-	12.09984+	631.1847+	
1.193160+	140.2876+	4.499216+	2.572455+	.0023989+	
22.26605+	33.71545+	1.399510+	.5440369+	20.0	1.222
415.0130+	.0000000+	.1000000+	.002055	2017.0	
3.37677+	.4731233+	.070291-	12.36770+	632.2573+	
1.192408+	140.2876+	4.500001+	2.5833573+	.0023989+	
22.30008+	33.69420+	1.541125+	.5438805+	20.0	1.223
416.0130+	2.500000+	.1000000+	.002055	2017.0	
3.37677+	.379145+	.0998776+	9.131727+	634.5206+	
1.194584+	140.2876+	4.502996+	2.5825432+	.0023980+	
22.33282+	33.75571+	1.537976+	.5443329+	20.0	1.220
417.0130+	5.000000+	.1000000+	.002055	2017.0	
3.37677+	.4110507+	.1464946+	7.864946+	634.5206+	
1.194584+	140.2876+	4.502996+	2.706311+	.0023980+	
22.33282+	33.75571+	1.473151+	.5443329+	20.0	1.223
438.0130+	5.000000-	.1500000+	.002049	2012.7	
.0201536+	.437627+	.0708179+	.1197158+	106.7805+	
.0490540+	139.0786+	.777706+	.5000208+	.0020584+	
6.306353+	1.306156+	.0271223+	.0467610+	20.0	1.006
439.0130+	2.500000-	.1500000+	.002049	2012.7	
.1351510+	.4433903+	.1267951-	.5548291+	117.3412+	
.0539064+	139.3263+	.0422041+	2.507140+	.0020591+	
6.304148+	1.523249+	.1282381+	.0511491+	20.0	1.007
440.0130+	.0000000+	.1500000+	.002049	2012.7	
.2450628+	.0554315+	.0928691-	.9746737+	117.3412+	
.0539064+	139.3263+	.0422041+	4.512416+	.0020606+	
6.299741+	1.523249+	.2362282+	.0511491+	20.0	1.007
441.0130+	2.500000+	.1500000+	.002049	2012.7	
.3211131+	.4201012+	.0264886-	1.374029+	106.7805+	
.0491742+	139.3263+	.7564057+	7.811523+	.0020620+	
6.310100+	1.369473+	.3661109+	.0468676+	20.0	1.006
442.0130+	5.000000+	.1500000+	.002075	2012.7	
.4516090+	.3160191+	.0976716+	1.427708+	105.6992+	
.0450730+	139.5725+	.7573000+	10.00125+	.0020548+	
5.863560+	1.273642+	.4322080+	.0431291+	20.0	1.006

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403.0130+	5.000000+	.1500000+	.002050	2012.7	
.4079540+	.3143939+	.031777+	1.307799+	105.5906+	
.0227737+	197.7034+	.5349056+	17.91200+	.0020546+	
5.663960+	1.273642+	.3500409+	.0222606+	40.0	1.006
404.0130+	2.500000+	.1500000+	.002050	2012.7	
.2021374+	.2020570+	.0270003-	1.000785+	95.95403+	
.0201911+	197.7034+	.4757716+	13.97305+	.0020519+	
5.657044+	1.129209+	.2765436+	.0197919+	40.0	1.005
405.0130+	.0000000+	.1500000+	.002047	2012.7	
.1779051+	.2534194+	.0935776-	.70.0170+	101.6071+	
.0222775+	197.7751+	.5339729+	6.771517+	.0020577+	
6.761326+	1.469316+	.1733506+	.0255999+	40.0	1.006
406.0130+	2.500000-	.1500000+	.002047	2012.7	
.0610977+	.2413503+	.1322670-	.2525984+	93.67298+	
.0233012+	197.9486+	.4742259+	2.5.2120+	.0020546+	
6.755694+	1.303143+	.0597074+	.0227706+	40.0	1.005
407.0130+	5.000000-	.1500000+	.002041	2012.7	
.0350404-	.2431630+	.1140056-	.1177056-	105.4071+	
.0267755+	198.1209+	.5330434+	1.367903-	.0020562+	
6.766065+	1.469316+	.0550203-	.0255999+	40.0	1.006
408.0130+	5.000000+	.1500000+	.002020	2012.7	
1.138114+	.4012601+	.1257459+	2.354575+	305.3531+	
.2059527+	139.4500+	2.129736+	5.960359+	.0021834+	
12.11340+	0.079600+	.6050494+	.2223543+	20.0	1.050
409.0130+	2.500000+	.1500000+	.002076	2012.7	
.9531705+	.4051301+	.0471257+	2.357704+	305.0265+	
.2056770+	139.4500+	2.125047+	5.335222+	.0021836+	
12.10503+	0.072476+	.7415750+	.2222001+	20.0	1.050
410.0130+	.0000000+	.1500000+	.002070	2012.7	
.7611137+	.3543901+	.0017771-	2.157671+	105.3535+	
.2050377+	139.4500+	2.109736+	2.061062+	.0021812+	
12.13074+	0.079600+	.5916767+	.2223543+	20.0	1.050
411.0130+	2.500000-	.1500000+	.002069	2012.7	
.724061+	.3232413+	.0117000-	1.971373+	305.0465+	
.2056770+	139.4500+	2.111950+	2.170699+	.0021813+	
12.11320+	0.072476+	.4041073+	.2222001+	20.0	1.050

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457.0130+	.000000-	.1500000+	.002009	2012.7	
.473020+	.3002589+	.062219-	1.57540+	301.6064+	
.2820876+	139.8204+	2.157092+	1.676885+	.0021836+	
12.10307+	7.97102E+	.368951E+	.7200221+	20.0	1.049
458.0130+	.000000-	.1500000+	.002009	2012.7	
.294711+	.2816246+	.1010547-	1.043439+	301.1264+	
.1441949+	137.7761+	1.507393+	1.043341+	.0021799+	
12.40847+	0.064226+	.575711+	.1260230+	40.0	1.048
459.0130+	.000000-	.1500000+	.002041	2012.7	
.4139091+	.3035	.1893357-	1.301982+	301.6004+	
.1458781+	138.1209+	1.522334+	1.057926+	.0021814+	
12.40006+	0.158361+	.3638337+	.1273062+	40.0	1.049
460.0130+	.0000000+	.1500000+	.002036	2012.7	
.5493387+	.3162401+	.0265966-	1.732837+	301.0865+	
.1443424+	138.2931+	1.535562+	3.309611+	.002182E+	
12.12138+	0.072476+	.4805261+	.1261357+	40.0	1.050
461.0130+	.0000000+	.1500000+	.002034	2012.7	
.7134170+	.3670949+	.0656561+	1.743414+	301.0865+	
.1443424+	138.4652+	1.537229+	1.942535+	.0021850+	
12.10918+	0.072476+	.6234303+	.1261357+	40.0	1.050
462.0130+	.0000000+	.1500000+	.002034	2012.7	
.5751190+	.4311977+	.0206911+	1.802575+	301.4006+	
.1454401+	138.4652+	1.540919+	1.017250+	.0021873+	
12.09688+	0.133864+	.7640292+	.1269731+	40.0	1.051
463.0130+	.0000000+	.1500000+	.00206	2012.7	
2.343805+	.1237457+	.1518145+	1.531135+	301.5392+	
1.174865+	139.8204+	1.523940+	1.994955+	.0023610+	
22.22919+	33.1984E+	1.077677+	.5402013+	20.0	1.220
469.0130+	.0000000+	.1500000+	.002069	2012.7	
2.322465+	.3760725+	.0344513+	1.142705+	301.5392+	
1.174865+	139.8204+	1.523940+	1.976791+	.0023610+	
22.22919+	33.1984E+	1.067865+	.5402013+	20.0	1.221
470.0130+	.0000000+	.1500000+	.002069	2012.7	
2.354475+	.3044879+	.0869313-	7.732566+	301.5392+	
1.197111+	139.8204+	1.523940+	1.966795+	.0023603+	
22.65676+	33.82709+	1.071622+	.5448568+	20.0	1.221

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471.0130+	0.000000-	.1000000+	.002069	2012.7	
2.094241+	.2444361+	.1000000-	3.170074+	630.8343+	
1.165044+	139.8204+	.1483139+	1.727148+	.0023714+	
22.15736+	32.93200+	.9673050+	.5322442+	20.0	1.218

471.0130+	0.000000-	.1000000+	.002069	2012.7	
1.927400+	.1852301+	.1000000-	15.10674+	630.8325+	
1.173286+	139.9436+	.1508547+	1.642975+	.0023702+	
22.16934+	33.15337+	.8069287+	.5390673+	20.0	1.220

471.0130+	0.000000-	.1000000+	.002041	2012.7	
.7709225+	.3354709+	.1000000-	1.260030+	630.2815+	
.5932472+	198.1204+	3.181296+	1.287344+	.0023627+	
22.15922+	33.45104+	.4821739+	.3745493+	40.0	1.219

471.0130+	0.000000-	.1000000+	.002036	2012.7	
.3650000+	.3812667+	.1000000-	1.100003+	630.2815+	
.5971072+	198.2931+	3.170533+	1.510405+	.0023641+	
22.148912+	33.11062+	.6034233+	.3745061+	40.0	1.219

471.0130+	0.000000+	.1000000+	.002034	2012.7	
1.132440+	.3815249+	.1000000-	3.000036+	631.4732+	
.6003321+	198.4652+	3.181792+	1.967644+	.0023648+	
22.148250+	33.57408+	.7338719+	.3751297+	40.0	1.220

471.0130+	0.000000+	.1000000+	.002030	2012.7	
1.423241+	.4260674+	.0500003-	3.340327+	631.4732+	
.5971761+	128.6371+	3.179038+	2.383205+	.0023662+	
22.35116+	33.39756+	.5910906+	.3739949+	40.0	1.220

471.0130+	0.000000+	.1000000+	.002030	2012.7	
1.619116+	.4307704+	.0069000+	1.267734+	631.4732+	
.5976775+	128.6371+	3.179038+	2.700108+	.0023663+	
22.35766+	33.43500+	1.013292+	.3741697+	40.0	1.220

471.0130+	0.000000+	.1000000+	.002079	2015.6	
.2412492+	.1325175+	.0000006-	1.013276+	.0000000+	
.0000000+	132.8570+	.0000000+	.0000000+	.0012834+	
.0000000+	.0000000+	.2418492+	.0000000+	20.0	1.000

471.0130+	0.000000+	.1000000+	.002079	2015.6	
.1422642+	.1165287+	.1000000-	.0070345+	.0000000+	
.0000000+	132.8570+	.0000000+	.0000000+	.0019534+	
.0000000+	.0000000+	.1422642+	.0000000+	20.0	1.000

C.E.M.
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480.0130+ .096000+ .000000+ .000000+	2.500000- .2038377+ 140.3300+ .000000+	.2500000+ .141000- .0000000+ .0960003+	.002053 .4711017+ 0000000+ .0000000+	2015.6 .0000000+ .0020617+ 20.0	1.000
481.0130+ .0916481+ .0000000+ .0000000+	2.500000- .2072694+ 197.6371+ .0000000+	.2500000+ .1451000- .0000000+ .0916481+	.002051 .4421774+ 0000000+ .0000000+	2015.6 .0000000+ .0020617+ 40.0	1.000
482.0130+ .1743111+ .0000000+ .0000000+	.0000000+ .2115390+ 197.6371+ .0000000+	.2500000+ .1056400- .0000000+ .1743111+	.002051 .4240100+ 0000000+ .0000000+	2015.6 .0000000+ .0020617+ 40.0	1.000
483.0130+ .2551771+ .0000000+ .0000000+	2.500000+ .2346109+ 197.6371+ .0000000+	.2500000+ .0555600- .0000000+ .2551771+	.002051 1.087637+ 0000000+ .0000000+	2015.6 .0000000+ .0020617+ 40.0	1.000
487.0130+ .1600470+ .0572000+ 6.241004+	2.500000- .2461077+ 130.2200+ 1.616100+	.2500000+ .1227000- .8847171+ .1513703+	.002087 .6500000+ 2.794774+ .0541547+	2015.6 123.1000+ .0021000+ 20.0	1.003
488.0130+ .2362920+ .0572300+ 6.249000+	.0000000+ .2554310+ 139.3000+ 1.617043+	.2500000+ .0550000- .0055339+ .2253327+	.002083 .3300000+ 4.163507+ .0541300+	2015.6 123.4010+ .0020971+ 20.0	1.008
489.0130+ .3070977+ .0539930+ 6.253072+	2.500000+ .2791130+ 139.3000+ 1.525701+	.2500000+ .0504000- .8354093+ .3104458+	.002083 1.172000+ 0.060165+ .0512070+	2015.6 116.4100+ .0020900+ 20.0	1.007
490.0130+ .2039000+ .0273000+ 6.266000+	2.500000+ .2670404+ 197.1191+ 1.527000+	.2500000+ .0470000- .5911000+ .2763000+	.002063 1.055000+ 10.39000+ .0265792+	2015.6 116.5192+ .0020900+ 40.0	1.007
491.0130+ .1720101+ .0272000+ 6.256000+	.0000000+ .2410000+ 197.1000+ 1.525000+	.2500000+ .0990000- .5900000+ .1679391+	.002054 .7100000+ 6.333000+ .0265170+	2015.6 116.5100+ .0020900+ 40.0	1.007

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492.0130+	2.500000-	.2500000+	.002051	2015.6	
.0844600+	.2320518+	.1269498-	.3639705+	104.8672+	
.0245162+	197.6371+	.5306050+	3.445066+	.0020876+	
6.262936+	1.371090+	.0824389+	.0239295+	40.0	1.006
496.0130+	2.500000+	.2500000+	.002083	2015.6	
.7291043+	.3814557+	.0359862-	1.911373+	300.2570+	
.2824754+	139.3520+	2.154664+	2.581124+	.0022047+	
12.05734+	7.981987+	.5685132+	.2202580+	20.0	1.049
497.0130+	.0000000+	.2500000+	.002078	2015.6	
.6188495+	.3340909+	.0844769-	1.852338+	296.7924+	
.2792161+	139.4755+	2.127917+	2.216381+	.0022040+	
12.06141+	7.889887+	.4837724+	.2182712+	20.0	1.048
498.0130+	2.500000-	.2500000+	.002078	2015.6	
.5085947+	.3087169+	.1098016-	1.647446+	296.7924+	
.2792161+	139.4755+	2.127917+	1.821508+	.0022040+	
12.06141+	7.889887+	.3975830+	.2182712+	20.0	1.048
499.0130+	2.500000-	.2500000+	.002063	2015.6	
.3522163+	.2811973+	.1079019-	1.252559+	296.7924+	
.1407486+	197.1191+	1.505650+	2.502460+	.0022003+	
12.05356+	7.871453+	.3087591+	.1233822+	40.0	1.048
500.0130+	.0000000+	.2500000+	.002063	2015.6	
.4672257+	.2974366+	.0861134-	1.570841+	296.7924+	
.1409128+	197.1191+	1.505650+	3.315707+	.0022018+	
12.05952+	7.880670+	.4095192+	.1235088+	40.0	1.048
501.0130+	2.500000+	.2500000+	.002049	2015.6	
.5570768+	.3376077+	.0381650-	1.650071+	299.9863+	
.1425958+	197.8095+	1.516541+	3.906684+	.0022065+	
12.04781+	7.974793+	.4875537+	.1247998+	40.0	1.049
502.0130+	2.500000+	.2500000+	.002038	2015.6	
1.146500+	.4623943+	.0764079-	2.479485+	628.9237+	
.6020973+	198.3258+	3.171164+	1.904177+	.0023952+	
22.35310+	33.67281+	.7156245+	.3758182+	40.0	1.219
503.0130+	.0000000+	.2500000+	.002038	2015.6	
1.009926+	.3888899+	.1322249-	2.596946+	629.9960+	
.6020744+	198.3258+	3.176570+	1.677411+	.0023877+	
22.38378+	33.67152+	.6303867+	.3758092+	40.0	1.220

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504.0130+	2.500000-	.250000C+	.002044-	2013.6	
.8643676+	.3500009+	.1638976-	2.469615+	629.9960+	
.6020744+	198.4978+	3.173821+	1.435649+	.0023870+	
22.39036+	33.67152+	.5395302+	.3750092+	40.0	1.219
505.0130+	2.500000-	.250000C+	.002044-	2013.6	
1.394189+	.3772267+	.2419390-	3.695892+	630.5315+	
1.186381+	140.7044+	4.481247+	1.175161+	.0023865+	
22.27840+	33.52391+	.6376698+	.5426233+	20.0	1.219
506.0130+	.0000000+	.2500000+	.002044-	2013.6	
1.589803+	.4195167+	.2089132-	3.789605+	631.0665+	
1.186694+	140.5820+	4.488955+	1.339689+	.0023831+	
22.29664+	33.53276+	.7270347+	.5426888+	20.0	1.220
507.0130+	2.500000+	.2500000+	.002044-	2013.6	
1.764076+	.4643441+	.1542842-	3.799071+	631.0665+	
1.186694+	140.5820+	4.488955+	1.486546+	.0023824+	
22.30319+	33.53276+	.8067320+	.5426888+	20.0	1.220
514.0130+	2.500000-	.3000000+	.002087-	2014.2	
.1956133+	.2528941+	.1297303-	.7734988+	139.6992+	
.0695514+	139.2773+	1.003028+	2.812448+	.0021000+	
6.698924+	1.965334+	.1828928+	.0650286+	20.0	1.010
515.0130+	.0000000+	.3000000+	.002087-	2014.2	
.2382926+	.2630437+	.0956603-	.9059048+	132.5965+	
.0616434+	139.2773+	.9520323+	3.865663+	.0021016+	
6.250729+	1.741874+	.2244563+	.0588641+	20.0	1.009
516.0130+	.2500000+	.3000000+	.002087-	2014.2	
.3094247+	.2892635+	.0476580-	1.069698+	132.5965+	
.0616434+	139.2773+	.9520323+	5.019592+	.0021023+	
6.248550+	1.741874+	.2914582+	.0588641+	20.0	1.009
517.0130+	2.500000+	.3000000+	.002087-	2014.2	
.2515831+	.2675220+	.0596745-	.9404200+	123.2915+	
.0288919+	196.8421+	.6263474+	8.707713+	.0020994+	
6.242484+	1.615808+	.2445184+	.0288806+	40.0	1.008
518.0130+	.0000000+	.3000000+	.002087-	2014.2	
.1761081+	.2388895+	.1225013-	.7371950+	123.2915+	
.0310143+	197.3612+	.6246998+	5.678275+	.0020994+	
6.701055+	1.734505+	.1708105+	.0300814+	40.0	1.008

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519.0130+	2.500000-	.3000000+	.002056	2014.2	
.1096183+	.2299151+	.1454123-	.4767774+	123.2915+	
.0309457+	197.3612+	.6246990+	3.542256+	.0020979+	
6.690935+	1.730676+	.1063279+	.0300170+	40.0	1.008

520.0130+	2.500000-	.3000000+	.002038	2014.2	
.3665925+	.2717955+	.1380042-	1.348780+	300.2570+	
.1503942+	198.2235+	1.514739+	2.437543+	.0022025+	
12.71815+	8.410926+	.3186668+	.1307327+	40.0	1.049

521.0130+	.0000000+	.3000000+	.002038	2014.2	
.4474585+	.2948725+	.0943456-	1.517461+	299.9863+	
.1504252+	198.2235+	1.513371+	2.974623+	.0022072+	
12.70500+	8.412661+	.3885505+	.1307562+	40.0	1.049

522.0130+	2.500000+	.3000000+	.002036	2014.2	
.5103542+	.3371803+	.0401315-	1.513594+	303.4477+	
.1442411+	198.2235+	1.529502+	3.532201+	.0022060+	
12.03968+	8.666816+	.4480198+	.1885503+	40.0	1.050

523.0130+	2.500000-	.3000000+	.002072	2014.9	
.4836984+	.3070253+	.1153949-	1.575434+	272.0494+	
.2562374+	139.7467+	1.946731+	1.887696+	.0022112+	
12.03604+	7.240571+	.3850374+	.2039721+	20.0	1.04

524.0130+	.0000000+	.3000000+	.002072	2014.9	
.6046230+	.3400115+	.0859989-	1.778242+	272.0494+	
.2562374+	139.7467+	1.946731+	2.359620+	.0022120+	
12.03198+	7.240571+	.4812968+	.2039721+	20.0	1.04

525.0130+	2.500000+	.3000000+	.002072	2014.9	
.7006514+	.3789183+	.0573950-	1.849082+	272.0494+	
.2562374+	139.7467+	1.946731+	2.734383+	.0022120+	
12.03198+	7.240571+	.5577380+	.2039721+	20.0	1.04

532.0130+	2.500000+	.3000000+	.002083	2014.9	
1.657378+	.5201669+	.1510514-	3.186243+	597.3932+	
1.126656+	139.3765+	.4286181+	1.471059+	.0023953+	
22.24809+	31.83623+	.7793353+	.5297782+	20.0	1.196

533.0130+	.0000000+	.3000000+	.002074	2014.9	
1.429755+	.4288205+	.1953563-	3.334158+	629.4601+	
1.187133+	139.6234+	.508268+	1.204377+	.0023953+	
22.24809+	33.54514+	.6537123+	.5427804+	20.0	1.221

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534.0130+	2.500000-	.3000000+	.002014	2014.9	
1.276821+	.3687627+	2.113290-	3.462391+	629.9960+	
1.186066+	135.5234+	1.512107+	1.076517+	.0023905+	
22.25357+	33.51500+	.540726+	.5425573+	20.0	1.221

535.0130+	2.500000-	.3000000+	.002053	2014.9	
.7978778+	.3525650+	.0793044-	2.263065+	629.9960+	
.6024243+	137.4993+	3.189834+	1.324444+	.0023877+	
22.39679+	33.69109+	.4979192+	.3759455+	40.0	1.220

536.0130+	.0000000+	.3000000+	.002037	2014.9	
.9254664+	.3765822+	.1216687-	2.333605+	629.9960+	
.6027741+	138.3606+	3.176013+	1.535345+	.0023891+	
22.39663+	33.71065+	.5774153+	.3760817+	40.0	1.221

537.0130+	2.500000+	.3000000+	.002037	2014.9	
1.035084+	.4215336+	.0684147-	2.242677+	629.9960+	
.6027741+	138.3606+	3.176013+	1.717201+	.0023891+	
22.39663+	33.71065+	.6450082+	.3760817+	40.0	1.221

538.0130+	2.500000-	.3500000+	.002056	2019.1	
.0995849+	.2055293+	.1488980-	.4845291+	.0001168+	
.0000000+	140.2631+	.0000008+	.0000000+	.0020722+	
.0000000+	.0000000+	.0995849+	.0000000+	20.0	1.00

539.0130+	.0000000+	.3500000+	.002056	2019.1	
.2276228+	.2148331+	.1184757-	1.059532+	.0000116+	
.0000000+	140.2631+	.0000000+	.0000000+	.0020722+	
.0000000+	.0000000+	.2276228+	.0000000+	20.0	1.00

540.0130+	2.500000+	.3500000+	.002056	2019.1	
.2545190+	.2359781+	.0890538-	1.070094+	.0001168+	
.0000000+	140.2631+	.0000008+	.0000000+	.0020722+	
.0000000+	.0000000+	.2545190+	.0000000+	20.0	1.00

541.0130+	2.500000+	.3500000+	.002036	2019.1	
.2443950+	.2435903+	.0765394-	1.003303+	.0001166+	
.0000000+	198.3583+	.0000005+	.0000000+	.0020795+	
.0000000+	.0000000+	.2443950+	.0000000+	40.0	1.00

542.0130+	.0000000+	.3500000+	.002020	2019.1	
.1958754+	.2276501+	.1272847-	.8797452+	.0001166+	
.0000000+	199.2144+	.0000005+	.0000000+	.0020795+	
.0000000+	.0000000+	.1958754+	.0000000+	40.0	1.00

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543.0130+	2.500000-	.3500000+	.002018	2019.1	
.1096183+	.2106843+	.1630746-	.5202967+	.0001165+	
.0000000+	199.3852+	.0000005+	.0000000+	.0020832+	1.00
.0000000+	.0000000+	.1096183+	.0000000+	40.0	
544.0130+	2.500000-	.3500000+	.002013	2019.1	
.1168064+	.2311971+	.1477726-	.5052243+	134.5836+	
.0334065+	199.5558+	.6744156+	3.496516+	.0020435+	1.009
6.792986+	1.862287+	.1130304+	.0323265+	40.0	
545.0130+	.0000000+	.3500000+	.001995	2019.1	
.2192367+	.2427356+	.1232474-	.9031911+	143.9686+	
.0352564+	200.4068+	.7183816+	6.213350+	.0019308+	1.010
6.914124+	1.971744+	.2117704+	.0340557+	40.0	
546.0130+	2.500000+	.3500000+	.001995	2019.1	
.2767414+	.2615391+	.0823335-	1.058126+	151.5451+	
.0370075+	200.4068+	.7561574+	7.473910+	.0019716+	1.011
6.930555+	2.070303+	.2666602+	.0327055+	40.0	
547.0130+	2.500000+	.3500000+	.002055	2017.0	
.3023115+	.3121001+	.0118588-	.9686362+	140.4403+	
.0698117+	140.2076+	1.001088+	4.342323+	.0020308+	1.010
6.730217+	1.967037+	.2826367+	.0650313+	20.0	
548.0130+	.0000000+	.3500000+	.002055	2017.0	
.2631886+	.2791139+	.0563717-	.9429440+	140.6055+	
.0697337+	140.2076+	1.002043+	3.774196+	.0020736+	1.010
6.754535+	1.970485+	.2460321+	.0651879+	20.0	
549.0130+	2.500000-	.3500000+	.002051	2017.0	
.1671605+	.2672727+	.0767137-	.6254303+	133.7689+	
.0617473+	140.2076+	.9518706+	2.707156+	.0020678+	1.009
6.307835+	1.744512+	.1574390+	.0581563+	20.0	
556.0130+	2.500000-	.3500000+	.002055	2017.0	
.4694720+	.3230955+	.0547409-	1.453043+	299.7132+	
.2790049+	140.2076+	2.136461+	1.682665+	.0021619+	1.048
12.16703+	7.883919+	.3670603+	.2181422+	20.0	
557.0130+	.0000000+	.3500000+	.002055	2017.0	
.5512739+	.3467779+	.0305779-	1.569703+	299.7192+	
.2793345+	140.2076+	2.136461+	1.973527+	.0021626+	1.048
12.17702+	7.893227+	.4309068+	.2183435+	20.0	

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558.0130+ .5868400+ .2793343+ 12.17729+	2.500000+ .3882221+ 140.5327+ 7.893227+	.3500000+ .0224976+ 2.132736+ .4567073+	.002051 1.511608+ 2.100051+ .2183435+	2017.0 299.7192+ .0021626+ 20.0	1.048
559.0130+ .3360431+ .1444660+ 12.48132+	2.500000- .2786332+ 198.8756+ 8.079308+	.3500000+ .1132718- 1.507068+ .2936243+	.002025 1.206041+ 2.326104+ .1262301+	2014.9 299.7192+ .0021597+ 40.0	1.048
560.0130+ .4312853+ .1461524+ 12.47290+	.0000000+ .2944452+ 199.2182+ 8.173700+	.3500000+ .0270411- 1.522038+ .3762896+	.002019 1.464738+ 2.950927+ .1275157+	2014.9 303.2179+ .0021612+ 40.0	1.049
561.0130+ .5031662+ .1470047+ 12.16703+	2.500000+ .3358983+ 199.2182+ 8.221363+	.3500000+ .0320301- 1.568870+ .4386784+	.002019 1.497971+ 3.422709+ .1281639+	2014.9 312.5477+ .0021619+ 40.0	1.052
562.0130+ .9416396+ .5920087+ 22.44691+	2.500000+ .4589755+ 200.0721+ 33.10859+	.3500000+ .0632701- 3.145549+ .5914759+	.002001 2.051611+ 1.590584+ .3718827+	2014.9 627.3369+ .0023436+ 40.0	1.218
563.0130+ .8463974+ .5921537+ 22.46457+	.0000000+ .4017104+ 200.2425+ 33.11670+	.3500000+ .1123608- 3.145500+ .5316053+	.001998 2.106983+ 1.429354+ .3719199+	2014.9 627.8628+ .0023404+ 40.0	1.218
564.0130+ .7206058+ .5957983+ 22.61502+	2.500000- .3568385+ 200.2425+ 33.32053+	.3500000+ .1545930- 3.148124+ .4515647+	.001998 2.015417+ 1.209479+ .3733544+	2014.9 630.3884+ .0023372+ 40.0	1.218
565.0130+ 1.209246+ 1.163942+ 22.32270+	2.500000- .3780725+ 141.8262+ 32.88983+	.3500000+ .2060031- 4.444793+ .5588163+	.002015 3.195440+ 1.030922+ .5378804+	2014.9 630.3884+ .0023372+ 20.0	1.218
566.0130+ 1.330170+ 1.164218+ 22.34659+	.0000000+ .4338953+ 141.8262+ 32.89763+	.3500000+ .1700110- 4.448496+ .6146195+	.002015 3.065618+ 1.142544+ .5379393+	2014.9 630.9135+ .0023333+ 20.0	1.218

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567.0130+	2.500000+	.3500000+	.002015	2014.9	
1.468878+	.5117029+	.1141313-	2.870233+	330.9135+	
1.164211+	141.6262+	4.448476+	1.261616+	.0023340+	
2.33400+	32.15745+	.6787108+	.5379395+	20.0	1.218
574.0130+	2.500000-	.4000000+	.002011	2017.7	
.2276222+	.2562175+	.0790704-	.3861021+	163.7033+	
.0070796+	140.1404+	1.168137+	2.613960+	.0020917+	
7.10074+	2.460635+	.2095092+	.0001042+	20.0	1.014
575.0130+	.0000000+	.4000000+	.002014	2017.7	
.3129813+	.2748849+	.0319617-	1.138290+	169.6987+	
.0228040+	140.3836+	1.200504+	3.264046+	.0020302+	
7.536614+	2.700056+	.2050023+	.0074780+	20.0	1.015
576.0130+	2.500000+	.4000000+	.002052	2017.7	
.3241134+	.2077715+	.0628504-	1.335711+	169.5498+	
.0257722+	140.5001+	1.200091+	4.010376+	.0020339+	
7.623311+	2.703475+	.3003500+	.0074079+	20.0	1.015
577.0130+	2.500000+	.4000000+	.002028	2017.7	
.2965000+	.2756417+	.0592590-	1.075705+	163.7033+	
.0467053+	190.7350+	.5237221+	5.315755+	.0020310+	
7.635755+	2.613152+	.2034726+	.0446355+	40.0	1.014
578.0130+	.0000000+	.4000000+	.002011	2017.7	
.2192367+	.2512827+	.1011350-	.6724703+	163.7033+	
.0466343+	190.7350+	.0237221+	4.701150+	.0020336+	
7.624230+	2.500000+	.2094632+	.0445555+	40.0	1.014
579.0130+	2.500000-	.4000000+	.002021	2017.7	
.2479890+	.2330348+	.1215050-	1.041815+	157.6567+	
.0419602+	199.0704+	.7929375+	5.514631+	.0020280+	
7.626374+	2.511943+	.2375171+	.0430337+	40.0	1.013
580.0130+	2.500000-	.4000000+	.002019	2017.7	
.3288550+	.2011275+	.1082217-	1.169401+	312.2714+	
.1551952+	199.2494+	1.567835+	2.115935+	.0021730+	
12.75064+	2.575995+	.2045741+	.1343477+	40.0	1.052
581.0130+	.0000000+	.4000000+	.002012	2017.7	
.4133151+	.3000554+	.0725132-	1.373705+	311.9950+	
.1615695+	199.5904+	1.565174+	2.732674+	.0021776+	
12.85000+	2.555710+	.3550174+	.1315704+	40.0	1.052

G.E.M.
FORCE

582.0130+	2.500000+	.4000000+	.002012	2017.7	
.481601+	.3350436+	.0327744-	1.437430+	311.9950+	
.1513445+	199.5307+	1.563172+	3.124159+	.0021776+	
12.45002+	8.452746+	.4183291+	.1313784+	40.0	1.052
583.0130+	2.500000+	.4000000+	.002020	2017.7	
.590396+	.3865305+	.006907-	1.527425+	312.2714+	
.299612+	141.5053+	2.205223+	1.970531+	.0021752+	
12.46371+	8.466242+	.4542885+	.2305400+	20.0	1.052
584.0130+	.0000000+	.4000000+	.002022	2017.7	
.519264+	.3501611+	.0578421-	1.482930+	311.9950+	
.299690+	141.4037+	2.205115+	1.732669+	.0021783+	
12.46003+	8.460436+	.3995293+	.2305860+	20.0	1.052
585.0130+	2.500000-	.4000000+	.002022	2017.7	
.4461324+	.3214033+	.0975171-	1.394296+	312.2714+	
.299612+	141.4037+	2.207117+	1.495704+	.0021745+	
12.46790+	8.466242+	.3440195+	.2305400+	20.0	1.052
592.0130+	2.500000-	.4000000+	.002047	2017.7	
1.157453+	.3709103+	.209232-	3.059903+	634.1318+	
1.176423+	140.6304+	4.509207+	.3055701+	.0023519+	
22.26864+	33.24266+	.5327320+	.5405318+	20.0	1.220
593.0130+	.0000000+	.4000000+	.002077	2017.7	
1.255452+	.4415075+	.1605388-	2.843625+	634.1318+	
1.176423+	140.7526+	4.505391+	1.067107+	.0023526+	
22.26210+	33.24266+	.5760540+	.5405318+	20.0	1.220
594.0130+	2.500000+	.4000000+	.002037	2017.7	
1.333727+	.5007133+	.1304713-	2.663653+	635.3305+	
1.107730+	140.9966+	4.505992+	1.122920+	.0023526+	
22.45371+	33.56202+	.6096396+	.5429053+	20.0	1.220
595.0130+	2.500000+	.4000000+	.002038	2017.7	
.857177+	.4542744+	.0535306-	1.866910+	635.3305+	
.5997037+	140.7310+	3.196055+	1.420105+	.0023512+	
22.45360+	33.54229+	.5350163+	.3749076+	40.0	1.220
596.0130+	.0000000+	.4000000+	.002021	2017.7	
.7885027+	.4012630+	.1078355-	1.965705+	635.3305+	
.599410+	140.7310+	3.196055+	1.310113+	.0023505+	
22.44700+	33.52256+	.4932397+	.3747698+	40.0	1.220

G.2.11.
FORCE

597.0130+	2.500000-	.4000000+	.002003	2017.7	
.727793+	.355903+	.1460236-	2.044457+	635.3305+	
.590763+	199.2517+	3.177737+	1.213471+	.0023512+	
22.4536+	35.3129+	.4549304+	.374907+	40.0	1.220
598.0130+	2.500000+	.5000000+	.002073	2018.4	
.195613+	.227501+	.0591527-	.8597626+	.0000000+	
.0000000+	132.7473+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.1956133+	.0000000+	20.0	1.000
599.0130+	.0000000+	.5000000+	.002073	2017.7	
.1564900+	.2106041+	.0575371-	.7430559+	.0000000+	
.0000000+	132.7473+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.1564900+	.0000000+	20.0	1.000
600.0130+	2.500000-	.5000000+	.002066	2018.4	
.128037+	.203637+	.1450005-	.6281359+	.0000000+	
.0000000+	132.9251+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.1280370+	.0000000+	20.0	1.000
601.0130+	2.500000-	.5000000+	.002052	2017.7	
.127585+	.2042750+	.1451031-	.6245951+	.0000000+	
.0000000+	137.6701+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.1275855+	.0000000+	40.0	1.000
602.0130+	.0000000+	.5000000+	.002036	2018.4	
.1743111+	.2135434+	.1003372-	.8174088+	.0000000+	
.0000000+	198.3123+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.1743111+	.0000000+	40.0	1.000
603.0130+	2.500000+	.5000000+	.002037	2018.4	
.2232287+	.233761+	.0541894-	.9686154+	.0000000+	
.0000000+	198.3505+	.0000000+	0000000+	.0019636+	
.0000000+	.0000000+	.2261247+	.0000000+	40.0	1.000
604.0130+	2.500000+	.5000000+	.002015	2018.4	
.237000+	.2602844+	.0622905-	.9099389+	133.0667+	
.0333994+	199.3555+	.6673053+	7.102114+	.0020911+	
6.712673+	1.367064+	.2295403+	.0323000+	40.0	1.009
605.0130+	.0000000+	.5000000+	.002006	2018.4	
.1725141+	.2367527+	.0993077-	.7286678+	133.1840+	
.0334289+	199.7263+	.6668327+	5.160626+	.0020867+	
6.726853+	1.869540+	.1669337+	.0323475+	40.0	1.009

G.E.M.
FORCE

606.0130+	2.500000-	.5000000+	.002018	2018.4	
.1221975+	.2252142+	.1255326-	.5425833+	123.8370+	
.0310830+	199.3852+	.6210982+	3.931326+	.0020867+	
6.726853+	1.738344+	.1185137+	.0301459+	40.0	1.008
607.0130+	2.500000-	.5000000+	.002030	2018.4	
.1742737+	.2215995+	.1395890-	.7864352+	133.0667+	
.0662493+	141.2158+	.9422939+	2.630571+	.0020926+	
6.722844+	1.872026+	.1634455+	.0621330+	20.0	1.009
608.0130+	.0000000+	.5000000+	.002030	2018.4	
.2240662+	.2621979+	.0743902-	.8545687+	139.9467+	
.0696746+	141.2158+	.9910132+	3.215892+	.0020970+	
6.708654+	1.968815+	.2094713+	.0651363+	20.0	1.010
609.0130+	2.500000+	.5000000+	.002034	2018.4	
.2631888+	.2892635+	.0417207-	.9098583+	140.1937+	
.0697976+	141.0940+	.9936195+	3.770741+	.0020896+	
6.732359+	1.972291+	.2460174+	.0652437+	20.0	1.010
616.0130+	2.500000+	.5000000+	.002037	2018.4	
.4943682+	.3645397+	.0063106-	1.356143+	298.1264+	
.2794881+	140.2385+	2.125852+	1.768834+	.0021880+	
12.10699+	7.897572+	.3863797+	.2184374+	20.0	1.048
617.0130+	.0000000+	.5000000+	.002037	2018.4	
.4445757+	.3323993+	.0417429-	1.337474+	297.8601+	
.2795650+	140.2385+	2.123953+	1.590236+	.0021919+	
12.09954+	7.899767+	.3474426+	.2184849+	20.0	1.048
618.0130+	2.500000-	.5000000+	.002037	2018.4	
.4267927+	.3036421+	.0916373-	1.405578+	297.8601+	
.2795658+	140.2385+	2.123953+	1.526627+	.0021919+	
12.09954+	7.899767+	.3335449+	.2184849+	20.0	1.048
619.0130+	2.500000-	.5000000+	.002037	2018.4	
.3090878+	.2735049+	.1080325-	1.130099+	297.8601+	
.1410889+	198.3583+	1.501626+	2.190730+	.0021890+	
12.10168+	7.890517+	.2708709+	.1236440+	40.0	1.048
620.0130+	.0000000+	.5000000+	.002037	2018.4	
.3683895+	.2867528+	.0752703-	1.284693+	298.1264+	
.1410494+	198.7012+	1.500375+	2.611774+	.0021858+	
12.10503+	7.888313+	.3228515+	.1236138+	40.0	1.048

G.E.M.
FORCE

621.0130+	2.500000+	.5000000+	.002024	2018.4	
.4276912+	.3264965+	.0323867-	1.309941+	298.1264+	
.1410494+	198.8724+	1.499083+	3.032207+	.0021858+	
12.10503+	7.888313+	.3748227+	.1236138+	40.0	1.048
622.0130+	2.500000+	.5000000+	.002013	2018.4	
.7817046+	.4444456+	.0648993-	1.758830+	627.3644+	
.5978175+	199.5558+	3.143803+	1.307597+	.0023723+	
22.46397+	33.43345+	.4892327+	.3741463+	40.0	1.218
623.0130+	.0000000+	.5000000+	.002006	2018.4	
.7313880+	.3803428+	.1183138-	1.922970+	629.0878+	
.5994597+	199.7263+	3.149748+	1.220078+	.0023704+	
22.48210+	33.52530+	.4572719+	.3747889+	40.0	1.219
624.0130+	2.500000-	.5000000+	.002004	2018.4	
.6936505+	.3504282+	.1472026-	1.979436+	622.4496+	
.5927886+	199.8967+	3.113856+	1.170148+	.0023671+	
22.50028+	33.15221+	.4354944+	.3721703+	40.0	1.213
625.0130+	2.500000-	.5000000+	.002022	2018.4	
1.081208+	.3797641+	.1770224-	2.847052+	621.2549+	
1.155271+	141.4838+	4.390995+	.9358910+	.0023664+	
22.20505+	32.64482+	.5016575+	.5360213+	20.0	1.212
626.0130+	.0000000+	.5000000+	.002024	2018.4	
1.120331+	.4330495+	.1295188-	2.587073+	630.1477+	
1.171115+	141.3622+	4.457680+	.9566354+	.0023624+	
22.22928+	33.09254+	.5160162+	.5394073+	20.0	1.219
627.0130+	2.500000+	.5000000+	.002024	2018.4	
1.180793+	.5007135+	.0953337-	2.358221+	630.1477+	
1.180119+	141.3622+	4.457680+	1.000571+	.0023638+	
22.38703+	33.34695+	.5416187+	.5413094+	20.0	1.219

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF ONE PER CENT

AND A JET CONVERGENCE ANGLE OF 60°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP
C_L	C_D	C_M	L/D	V_J
C_u	V_o	V_J/V_o	A	ρ_l
Q	ΔV_J	C_L'	C_u'	C_M/C_L
$1/C_u$	A	q	P_M/P_o	

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M.
FORCE

631.0160+	2.500000+	.5000000+	.002079	2007.1
.2311794+	.2342865+	.0293336-	.9867377+	.0001179+
.0000000+	135.5201+	.0000008+	0000000+	.0020228+
.0000000+	.0000000+	.2311794+	.0000000+	.1268869-
0000000+	0000000+	20.0	1.000	
632.0160+	.0000000+	.5000000+	.002079	2007.1
.1920567+	.2089125+	.0670441-	.9193163+	.0001179+
.0000000+	139.5201+	.0000008+	0000000+	.0020228+
.0000000+	.0000000+	.1920567+	.0000000+	.3490852-
0000000+	0000000+	20.0	1.000	
633.0160+	2.500000-	.5000000+	.002075	2007.1
.1173670+	.1936861+	.0956278-	.6059637+	.0001179+
.0000000+	139.6440+	.0000008+	0000000+	.0020228+
.0000000+	.0000000+	.1173680+	.0000000+	.8147693-
0000000+	0000000+	20.0	1.000	
634.0160+	2.500000-	.5000000+	.002059	2007.1
.1257215+	.2106843+	.1253403-	.5970617+	.0001179+
.0000000+	197.3442+	.0000005+	0000000+	.0020228+
.0000000+	.0000000+	.1257915+	.0000000+	.9964133-
0000000+	0000000+	40.0	1.000	
635.0160+	.0000000+	.5000000+	.002045	2007.1
.2030635+	.2183766+	.0915451-	.9298774+	.0001179+
.0000000+	197.5645+	.0000005+	0000000+	.0020228+
.0000000+	.0000000+	.2030635+	.0000000+	.4508201-
0000000+	0000000+	40.0	1.000	
636.0160+	2.500000+	.5000000+	.002041	2007.1
.2443950+	.2380348+	.0642441-	1.026719+	.0001179+
.0000000+	198.2101+	.0000005+	0000000+	.0020228+
.0000000+	.0000000+	.2443950+	.0000000+	.2628659-
0000000+	0000000+	40.0	1.000	
637.0160+	2.500000+	.5000000+	.002029	2007.1
.2479890+	.2756417+	.0436966-	.8996788+	147.4424+
.0311127+	198.7449+	.7418676+	7.970669+	.0020335+
3.503253+	1.740004+	.2407062+	.0301733+	.1762037-
32.14121+	7.970669+	40.0	1.011	
638.0160+	.0000000+	.5000000+	.002024	2007.1
.1904843+	.2457271+	.0698682-	.7751864+	141.5447+
.0298681+	198.3171+	.7115766+	6.377478+	.0020325+
5.005248+	1.670404+	.1849599+	.0290019+	.3667525-
33.48043+	6.377495+	40.0	1.010	

G.E.H.
FORCE

639.0160+	2.500000-	.5000000+	.002022	2007.1
.1257915+	.2239322+	.1063368-	.5617394+	141.7890+
.0239137+	195.0821+	.7121087+	4.204300+	.0020251+
5.77334+	1.73286+	.1221372+	.0290505+	.8453420-
33.42275+	4.204300+	40.0	1.010	

640.0160+	2.500000-	.5000000+	.002040	2007.1
.125037+	.2415987+	.0421511-	.5293033+	131.0134+
.0263037+	110.703+	.756700+	2.271056+	.0020216+
5.83734+	1.590935+	.1212130+	.0533025+	.3272035-
17.7601+	2.274056+	20.0	1.009	

641.0160+	.0000000+	.5000000+	.002044	2007.1
.002725+	.2715017+	.0061552-	.7464539+	142.0326+
.0203172+	110.5523+	1.002772+	3.417224+	.0020139+
5.045373+	1.575121+	.1913746+	.0559963+	.0303524-
16.85059+	3.417621+	20.0	1.010	

642.0160+	2.500000+	.5000000+	.002044	2007.1
.0738586+	.3112542+	.0415097+	.708410+	142.1546+
.0233622+	110.5523+	1.010638+	4.612836+	.0020203+
5.241053+	1.77601+	.2585111+	.0560416+	.1519023+
16.84355+	4.612836+	20.0	1.010	

643.0160+	2.500000+	.5000000+	.002045	2007.1
.2657454+	.3230161+	.0611116+	.7107356+	171.9171+
.021240+	110.6334+	1.222448+	3.283106+	.0020176+
6.61867+	2.225705+	.2467019+	.0751410+	.2309752+
12.30831+	3.283186+	20.0	1.015	

644.0160+	.0000000+	.5000000+	.002045	2007.1
.2311794+	.7901093+	.0279221+	.7968698+	171.9171+
.0733564+	110.6334+	1.222448+	2.913176+	.0020176+
6.464706+	2.242397+	.2141826+	.0735220+	.1207813+
12.60136+	2.913176+	20.0	1.015	

645.0160+	.0000000+	.5000000+	.002045	2007.1
.1422642+	.2505567+	.0413159-	.5682460+	177.8453+
.0840477+	110.5334+	1.222448+	1.692664+	.0020183+
6.616314+	2.374953+	.1312343+	.0775312+	.0795277-
11.89289+	1.692664+	20.0	1.016	

646.0160+A	2.500000-	.5000000+	.002088	2026.2
.2210337+	.2666673+	.1106613-	.8288743+	297.9117+
.1129899+	195.8939+	1.520780+	1.256224+	.0021317+
9.049807+	6.319060+	.1985945+	.1015123+	.5006535-
8.850343+	1.956224+	40.0	1.047	

G.E.M.
FORCE

647.0160+A	.0000000+	.5000000+	.002092	2026.2
.2587711+	.3017101+	.0621976-	.8576813+	300.2483+
.1140428+	195.7206+	1.534064+	2.269069+	.002133+
9.957677+	6.377945+	.2322811+	.1023684+	.2403576-
8.768631+	2.269069+	40.0	1.048	

648.0160+	2.500000+	.5000000+	.002097	2026.2
.3234639+	.3384624+	.0113769-	.9556865+	299.4543+
.1140738+	195.547+	1.531363+	2.835565+	.0021453+
9.930663+	6.379680+	.2903433+	.1023934+	.0351721-
8.766247+	2.835565+	40.0	1.048	

649.0160+	2.500000+	.5000000+	.002078	2026.2
.334241+	.42402+	.0462457-	.7275004+	712.7577+
.0534923+	196.4124+	3.664522+	.5194247+	.0023675+
21.11247+	35.08782+	.2033754+	.3915397+	.1333584-
1.554018+	.5194247+	40.0	1.301	

650.0160+	.0000000+	.5000000+	.002073	2026.2
.012664+	.3295736+	.127059-	.5037030+	720.3624+
.644037+	196.5849+	3.664413+	.3125067+	.0023460+
21.31201+	36.01842+	.1224219+	.3917418+	.6340150-
1.552701+	.3125067+	40.0	1.301	

651.0160+	2.500000-	.5000000+	.002069	2026.2
.1106007+	.3500009+	.154557-	.5160007+	721.5883+
.6491365+	196.757+	3.667403+	.2782166+	.0023548+
21.36420+	36.30351+	.1095122+	.3936220+	.8557955-
1.540507+	.272168+	40.0	1.301	

652.0160+	2.500000-	.5000000+	.002080	2026.2
.1920567-	.1970713+	.0692481-	.9745542-	722.8062+
1.294861+	139.490+	5.181746+	.1483222-	.0023414+
21.61900+	36.8926+	.0837899-	.5642438+	.326434+
.772832+	.1483222-	20.0	1.301	

653.0160+	.0000000+	.5000000+	.002080	2026.2
.2240662-	.2232911+	.0280950-	1.003470-	722.8062+
1.234861+	139.490+	5.181746+	.1730425-	.0023448+
21.58767+	36.8926+	.097332-	.5642438+	.1253873+
.772833+	.1730425-	20.0	1.301	

654.0160+	2.500000+	.5000000+	.002078	2026.2
.1600472-	.2528941+	.0362279+	.6328626-	723.4144+
1.29591+	139.513+	.181547+	.1234979-	.0023416+
21.61781+	36.62004+	.0697084-	.5644506+	.2263578-
.771630+	.1234979-	20.0	1.301	

G.E.M.
FORCE

667.0160+	2.500000-	.4000000+	.002085	2028.3
.1458208+	.2334407+	.1294925-	.6246589+	134.5836+
.0562068+	139.2732+	.9663280+	2.594358+	.0020706+
5.754760+	1.588253+	.1386608+	.0532158+	.8880249-
17.79141+	2.594358+	20.0	1.009	

668.0160+	.0000000+	.4000000+	.002088	2028.3
.2098397+	.2613521+	.0988931-	.8029004+	134.6995+
.0562553+	139.1503+	.9680147+	3.730131+	.0020457+
5.768686+	1.589622+	.1986638+	.0532592+	.4712795-
17.77609+	3.730131+	20.0	1.009	

669.0160+	2.500000+	.4000000+	.002088	2028.3
.2631888+	.3027963+	.0592717-	.8691942+	134.6995+
.0562553+	139.1503+	.9680147+	4.678469+	.0020457+
5.768686+	1.589622+	.2491716+	.0532592+	.2252060-
17.77609+	4.678469+	20.0	1.009	

670.0160+	2.500000+	.4000000+	.002065	2028.3
.2623652+	.2777785+	.0800214-	.9445123+	141.7890+
.0299197+	196.9674+	.7198600+	8.768969+	.0020471+
5.764682+	1.673286+	.2547433+	.0290705+	.3070003-
33.42275+	8.768969+	40.0	1.010	

671.0160+	.0000000+	.4000000+	.002053	2028.3
.2084545+	.2512827+	.1110204-	.8295619+	134.6995+
.0284237+	197.4824+	.6820838+	7.333817+	.0020464+
5.766683+	1.589622+	.2026932+	.0276381+	.5375884-
35.18185+	7.333817+	40.0	1.009	

672.0160+	2.500000-	.4000000+	.002047	2028.3
.1150094+	.2307698+	.1483282-	.4983728+	134.6995+
.0261797+	197.8249+	.6809027+	4.393065+	.0020457+
5.313263+	1.464125+	.1120753+	.0255118+	1.289705-
38.19743+	4.393065+	40.0	1.009	

673.0160+	2.500000-	.4000000+	.002038	2026.2
.2318158+	.2777785+	.1058909-	.8345349+	305.6191+
.1171011+	198.2499+	1.541585+	1.979620+	.0021101+
10.15498+	6.548981+	.2075155+	.1048259+	.4567888-
8.539625+	1.979620+	40.0	1.049	

674.0160+	.0000000+	.4000000+	.002038	2026.2
.3072907+	.3098298+	.0639859-	.9918049+	309.1455+
.1184523+	198.2499+	1.559372+	2.594215+	.0021108+
10.15153+	6.624547+	.2747464+	.1059073+	.2082262-
8.442215+	2.594215+	40.0	1.050	

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675.0160+	2.500000+	.4000000+	.002029	2026.2
.3683895+	.3504282+	.0267232-	1.051255+	305.8848+
.1172029+	198.7619+	1.538950+	3.143176+	.0021064+
10.17264+	6.554674+	.3297427+	.1049074+	.075408-
8.532209+	3.143176+	40.0	1.049	

676.0160+	2.500000+	.4000000+	.002038	2026.2
.3841134+	.420541+	.0432997+	.9101047+	305.8848+
.2319641+	140.9197+	2.170631+	1.655917+	.0021064+
10.17264+	6.554674+	.3117895+	.1822880+	.1127265+
4.311011+	1.655917+	20.0	1.049	

677.0160+	.0000000+	.4000000+	.002045	2026.2
.3378776+	.3636939+	.0093271-	.9290162+	302.3553+
.2292876+	140.6765+	2.149294+	1.473597+	.0021057+
10.17610+	6.479043+	.2748564+	.1865207+	.0276049-
4.361334+	1.473597+	20.0	1.048	

678.0160+	2.500000-	.4000000+	.002052	2026.2
.2454058+	.3061795+	.0555805-	.8015095+	306.1502+
.2321654+	140.4329+	2.180044+	1.057030+	.0021028+
10.19030+	6.560361+	.1991663+	.1884206+	.2264842-
4.307273+	1.057030+	20.0	1.049	

685.0160+	2.500000-	.4000000+	.002033	2026.2
.2390039+	.3602573+	.0831812-	.6634256+	720.4409+
.6281010+	198.4207+	3.630874+	.385183+	.0023250+
20.97053+	35.12708+	.1467992+	.3857875+	.3480329-
1.592100+	.3805183+	40.0	1.296	

686.0160+	.0000000+	.4000000+	.002031	2026.2
.3432312+	.4252147+	.0449398-	.8071949+	720.4409+
.6281010+	198.5914+	3.627753+	.5464586+	.0023257+
20.96431+	35.12708+	.2108169+	.3857875+	.1309317-
1.592100+	.5464586+	40.0	1.296	

687.0160+	2.500000+	.4000000+	.002029	2026.2
.4582406+	.497363+	.0096549-	.9299916+	720.4409+
.6281010+	198.7619+	3.624641+	.7295651+	.0023264+
20.95809+	35.12708+	.2814571+	.3857875+	.0210696-
1.592100+	.7295651+	40.0	1.296	

688.0160+	2.500000-	.4000000+	.002157	2025.5
.1636038-	.1953797+	.0810813-	.8373634-	703.3722+
1.249997+	136.8975+	5.137946+	.1308833-	.0024465+
20.52609+	35.32151+	.0727129-	.5555550+	.4955954+
.8000016+	.1308833-	20.0	1.298	

G.E.M.
FORCE

689.0160+	.0000000+	.4000000+	.002154	2025.5
.1671605-	.2266743+	.0255715-	.7374476-	708.8013+
1.261982+	137.0225+	5.172879+	.1324586-	.0024245+
20.75070+	35.66019+	.0738999-	.5579099+	.1529758+
.7924032+	.1324586-	20.0	1.300	
690.0160+	2.500000+	.4000000+	.002150	2025.5
.0782453-	.2554315+	.0123750+	.3063260-	709.4174+
1.262299+	137.1475+	5.172657+	.0619863-	.0024210+
20.76781+	35.66915+	.0345866-	.5579719+	.1521575-
.7922047+	.0619863-	20.0	1.300	
691.0160+	2.500000-	.3500000+	.002154	2025.5
.0924717+	.2029919+	.1305929-	.4555439+	.0001176+
.0000000+	137.0225+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.0924717+	.0000000+	1.412246-
0000000+	0000000+	20.0	1.000	
692.0160+	.0000000+	.3500000+	.002150	2025.5
.2062831+	.2258285+	.1063088-	.9134502+	.0000117+
.0000000+	137.1475+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.2062831+	.0000000+	.5153541-
0000000+	0000000+	20.0	1.000	
693.0160+	2.500000+	.3500000+	.002145	2025.5
.2382926+	.2512025+	.0577451-	.9486074+	.0000117+
.0000000+	137.2724+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.2382926+	.0000000+	.2423292-
0000000+	0000000+	20.0	1.000	
694.0160+	2.500000+	.3500000+	.002132	2025.5
.2533801+	.2508553+	.0884943-	1.010064+	.0000117+
.0000000+	193.8400+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.2533801+	.0000000+	.3492552-
0000000+	0000000+	40.0	1.000	
695.0160+	.0000000+	.3500000+	.002123	2025.5
.2120486+	.2294877+	.1177833-	.9240083+	.0000117+
.0000000+	194.1896+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.2120486+	.0000000+	.5554546-
0000000+	0000000+	40.0	1.000	
696.0160+	2.500000-	.3500000+	.002116	2025.5
.1293555+	.2179492+	.1558488-	.5936500+	.0000117+
.0000000+	194.5385+	.0000000+	0000000+	.0020520+
.0000000+	.0000000+	.1293555+	.0000000+	1.204530-
0000000+	0000000+	40.0	1.000	

G.E.M.
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700.0160+	2.500000+	.3500000+	.002133	2025.5
.1422642+	.2376697+	.1076497-	.5985794+	146.4203+
.0609894+	137.7586+	1.062875+	2.332605+	.0020808+
5.656441+	1.7 3394+	.1340864+	.0574835+	.7566887-
16.39628+	2.332605+	20.0	1.011	
701.0160+	.0000000+	.3500000+	.002128	2025.5
.2133963+	.2706559+	.0590055-	.7884414+	146.5484+
.0610427+	137.8829+	1.062847+	3.495848+	.0020779+
5.664380+	1.724902+	.2011194+	.0575309+	.2765068-
16.38194+	3.495848+	20.0	1.011	
702.0160+ A	2.500000+	.3500000+	.002142	2025.5
.2631888+	.3205581+	.0216417-	.8210331+	140.6865+
.0586010+	137.4234+	1.023745+	4.491194+	.0020772+
5.666347+	1.655906+	.2486195+	.0553570+	.0822290-
17.06453+	4.491194+	20.0	1.010	
703.0160+ A	2.500000+	.3500000+	.002126	2025.5
.2569741+	.2811973+	.0805455-	.9135571+	134.1187+
.0281522+	194.0540+	.6911409+	9.128023+	.0020613+
5.694873+	1.574437+	.2499378+	.0273813+	.3134383-
35.52117+	9.1 8023+	40.0	1.009	
704.0160+	.0000000+	.3500000+	.002115	2025.5
.2012664+	.2551288+	.1179882-	.7888216+	134.2350+
.0281021+	194.5769+	.6898819+	7.161970+	.0020577+
5.689668+	1.571634+	.1957650+	.0273339+	.5862209-
35.58451+	7.161970+	40.0	1.009	
705.0160+	2.500000-	.3500000+	.002113	2025.5
.1150094+	.2337612+	.1689172-	.4919951+	134.3513+
.0258882+	194.7508+	.6898627+	4.442529+	.0020535+
5.247809+	1.447823+	.1121071+	.0252349+	1.468724-
38.62753+	4.442529+	40.0	1.009	
709.0160+	2.500000+	.3500000+	.002121	2026.2
.4374625+	.4119045+	.0147055+	1.062048+	305.8848+
.2390239+	138.1118+	2.214761+	1.830204+	.0021072+
10.47868+	6.754164+	.3530703+	.1929130+	.0336155+
4.183681+	1.830204+	20.0	1.049	
710.0160+	.0000000+	.3500000+	.002117	2026.2
.3449908+	.3518527+	.0350463-	.2804976+	305.8848+
.2390239+	138.2357+	2.212775+	1.443331+	.0021072+
10.47868+	6.754164+	.2784375+	.1929130+	.1015864-
4.183681+	1.443331+	20.0	1.049	

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711.0160+	2.500000-	.3500000+	.002117	2026.2
.2738586+	.2977215+	.1077344-	.9178483+	306.1502+
.2388948+	132.2357+	2.214695+	1.146356+	.0021035+
10.4811+	6.70517+	.2210507+	.1928289+	.3933941-
4.185942+	1.146356+	20.0	1.049	

712.0160+	2.500000-	.3500000+	.002094	2026.2
.2300188+	.2739323+	.1355631-	.8396921+	306.4153+
.1165554+	195.537+	1.567043+	1.973471+	.0017421+
12.21063+	6.518444+	.2060075+	.1043884+	.5893565-
8.579606+	1.973471+	40.0	1.049	

713.0160+	.0000000+	.3500000+	.002085	2026.2
.3683895+	.2917358+	.1317189-	1.258436+	309.6827+
.1578669+	195.8836+	1.560952+	2.333544+	.0021028+
13.55753+	8.88842+	.3101622+	.1363428+	.3575534-
6.334449+	2.333544+	40.0	1.050	

714.0160+	2.500000+	.3500000+	.002083	2026.2
.3773746+	.3504282+	.0307725-	1.076895+	306.4153+
.1150240+	196.0566+	1.562892+	3.200831+	.0020706+
10.13879+	6.432819+	.3384452+	.1031583+	.1027429-
8.693831+	3.280831+	40.0	1.049	

715.0160+	2.500000+	.3500000+	.002062	2026.2
.5912202+	.5098303+	.1016781+	1.159641+	726.4476+
.6446330+	197.0912+	3.635844+	.9171423+	.0023214+
21.37784+	36.05165+	.3594846+	.3919616+	.1719801+
1.551270+	.9171423+	40.0	1.302	

716.0160+	.0000000+	.3500000+	.002060	2026.2
.4815019+	.4427361+	.0317976-	1.027785+	726.4476+
.6446330+	197.2631+	3.632632+	.7470946+	.0023214+
21.37784+	36.05165+	.2928324+	.3919616+	.0560247-
1.551270+	.7470946+	40.0	1.303	

717.0160+	2.500000-	.3500000+	.002048	2026.2
.3594044+	.3773514+	.0716119-	.9524396+	727.0527+
.6387102+	197.7779+	3.676105+	.5627033+	.0023168+
21.30535+	35.72041+	.2123215+	.3897640+	.1992517-
1.565655+	.5627033+	40.0	1.302	

718.0160+	2.500000-	.3500000+	.002064	2026.2
.1991699-	.222117+	.0028003-	.8689342-	727.0527+
1.276899+	139.9591+	5.194748+	.1559794-	.0023189+
21.40079+	36.08168+	.0874742-	.5608061+	.0140603+
.783147+	.1559794-	20.0	1.302	

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719.0160+	.0000000+	.3500000+	.002073	2026.2
16.50621+	.2511979+	.1728215+	62.95323+	727.6573+
1.211159+	139.7142+	5.208181+	12.88380+	.0023137+
21.50279+	36.10208+	7.235885+	.5616265+	.0104700+
.7805427+	12.28380+	20.0	1.303	

720.0160+	2.500000+	.3500000+	.002073	2026.2
.1280378-	.3053337+	.0222776-	.419337 -	727.6573+
1.211159+	139.7142+	5.208181+	.0999389-	.0023137+
21.50279+	36.10208+	.0561283-	.5616265+	.220542+
.7805427+	.0499389-	20.0	1.303	

727.0160+	2.500000-	.3000000+	.002092	2024.1
.160047 +	.2305155+	.1704829-	.6710139+	134.9312+
.0556105+	139.0498+	.9703803+	2.077939+	.0020358+
5.720323+	1.571403+	.1516158+	.0516809+	1.065203-
17.98218+	2.077999+	20.0	1.009	

728.0160+	.0000000+	.3000000+	.002083	2024.1
.2311794+	.2672727+	.1064986-	.8449568+	142.0328+
.0585374+	139.2961+	1.013646+	3.949255+	.0020358+
5.720323+	1.554109+	.2183951+	.0553003+	.4506751-
17.08307+	3.949255+	20.0	1.010	

729.0160+	2.500000+	.3000000+	.002081	2024.1
.2951983+	.3112543+	.0566622-	.9484150+	142.0328+
.0585374+	139.4191+	1.018747+	5.042895+	.0020358+
5.720323+	1.554109+	.278737+	.0553003+	.1919465-
17.08307+	3.042895+	20.0	1.010	

730.0160+	2.500000+	.3000000+	.002058	2024.1
.2731473+	.2790605+	.0691719-	.9788103+	135.0468+
.021120+	197.3458+	.6843157+	9.712916+	.0020309+
5.734123+	1.572751+	.2656760+	.0273528+	.364610-
35.55925+	9.712916+	40.0	1.009	

731.0160+ A	.0000000+	.3000000+	.002049	2024.1
.2084545+	.2504280+	.1269532-	.8323932+	135.0468+
.0211220+	197.7204+	.6840192+	7.412489+	.0020316+
5.732120+	1.572751+	.027527+	.0273528+	.6090211-
35.55925+	7.412489+	40.0	1.009	

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732.0160+	2.500000-	.3000000+	.002042	2024.1
.1168064+	.2316245+	.1788469-	.5042921+	135.0468+
.0258723+	198.0634+	.6818365+	.514728+	.0020309+
5.275393+	1.446930+	.1138606+	.0252198+	1.531139-
38.65136+	4.514728+	40.0	1.009	
733.0160+	2.500000-	.3000000+	.002031	2024.1
.2390039+	.2786332+	.1407621-	.8577726+	304.1870+
.1150321+	198.0767+	1.531835+	2.077713+	.0020776+
10.17928+	4.433272+	.2143471+	.1031648+	.5889532-
8.693220+	2.077713+	40.0	1.048	
734.0160+	.0000000+	.3000000+	.002028	2024.1
.3378401+	.3102572+	.0854788-	1.088903+	307.2095+
.1163457+	198.7475+	1.545727+	2.903759+	.0020855+
10.15579+	6.506736+	.3026304+	.1042201+	.2530157-
8.595069+	2.903759+	40.0	1.049	
735.0160+	2.500000+	.3000000+	.002026	2024.1
.4133151+	.3564111+	.0473678-	1.159658+	306.9450+
.1164160+	198.9132+	1.543071+	3.550327+	.0020891+
10.15318+	6.510667+	.3702160+	.1042755+	.1145046-
8.589880+	3.550327+	40.0	1.049	
736.0160+	2.500000+	.3000000+	.002042	2024.1
.4908116+	.4305121+	.0118901+	1.140064+	306.9450+
.2385030+	140.7650+	2.180548+	2.057884+	.0020898+
10.50638+	6.739445+	.3962942+	.1925736+	.0242255+
4.192818+	2.057884+	20.0	1.049	
737.0160+	.0000000+	.3000000+	.002047	2024.1
.4410191+	.371519+	.0385952-	1.185051+	303.1417+
.2358809+	140.6432+	2.155395+	1.869668+	.0020934+
10.50310+	6.665353+	.3563460+	.1708605+	.0875138-
4.239426+	1.869668+	20.0	1.048	
738.0160+	2.500000-	.3000000+	.002047	2024.1
.3129813+	.3112543+	.0914603-	1.005548+	303.4033+
.2357510+	140.6442+	2.15755+	1.377592+	.0020891+
10.50995+	6.661683+	.3532721+	.1907755+	.2922230-
4.41761+	1.37592+	20.0	1.048	
745.0160+	2.500000+	.3000000+	.002139	2026.2
.0640189-	.3197123+	.1245591+	.2002390-	713.7526+
1.70013+	137.4905+	5.191284+	.0504080-	.0023816+
21.11105+	35.8712+	.0282019-	.5594740+	1.745661-
.7273929+	.0504080-	20.0	1.299	

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746.0160+	.0000000+	.3000000+	.002124	2026.2
.1031415-	.2757307+	.0925843+	.3740662-	714.9716+
1.269825+	137.9878+	5.181411+	.0812250-	.0023728+
21.15024+	35.88180+	.0454403-	.5594375+	.8976437-
.7875097+	.0812250-	20.0	1.300	

747.0160+	2.500000-	.3000000+	.002124	2026.2
.1138114-	.2359781+	.1396314-	.482963-	713.7840+
1.270069+	137.9878+	5.172504+	.0896103-	.0023770+
21.15190+	35.88870+	.0501356-	.5594848+	1.754054+
.7873583+	.0896103-	20.0	1.298	

748.0160+	2.500000-	.3000000+	.002103	2026.2
.4851959+	.3837616+	.0942485-	1.264315+	712.5963+
.6390688+	195.1902+	3.650778+	.7592233+	.0023714+
21.14968+	35.74047+	.2960192+	.3898974+	.1942489-
1.564776+	.7592233+	40.0	1.296	

749.0160+	.0000000+	.3000000+	.002099	2026.2
.5534828+	.4504285+	.0334865-	1.228791+	714.9716+
.6415960+	195.3638+	3.659692+	.8626655+	.0023735+
21.14397+	35.88180+	.3371613+	.3908367+	.0605015-
1.558612+	.8626655+	40.0	1.299	

750.0160+	2.500000+	.3000000+	.002089	2026.2
.6631011+	.5243603+	.0127759+	1.264500+	716.7691+
.637386+	195.7105+	3.662393+	1.040585+	.0023695+
20.98340+	35.63811+	.4050119+	.3892154+	.0192669+
1.569270+	1.040585+	40.0	1.300	

751.0160+	2.500000+	.2500000+	.002117	2026.2
.2489624+	.2537399+	.0506709-	.9811715+	.0000115+
.0000000+	138.2430+	.0000000+	.0000000+	.0021189+
.0000001+	.0000000+	.2489624+	.0000000+	.2436953-
.0000000+	.0000000+	20.0	1.000	

752.0160+	.0000000+	.2500000+	.002117	2026.2
.1813869+	.2300575+	.0978987-	.7854414+	.0000115+
.0000000+	138.2430+	.0000000+	.0000000+	.0021189+
.0000001+	.0000000+	.1813869+	.0000000+	.5397234-
.0000000+	.0000000+	20.0	1.000	

753.0160+	2.500000-	.2500000+	.002112	2026.2
.1066981+	.2055293+	.1575610-	.5191383+	.0000115+
.0000000+	138.3668+	.0000000+	.0000000+	.0021151+
.0000001+	.0000000+	.1066981+	.0000000+	1.476698-
.0000000+	.0000000+	20.0	1.000	

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754.0160+	2.500000-	.2500000+	.002099	2026.2
.1060243+	.2179492+	.0654296-	.4864632+	.0000116+
.0000000+	195.3740+	.0000000+	0000000+	.0021001+
.0000001+	.0000000+	.1060243+	.0000000+	.6171188-
0000000+	0000000+	40.0	1.000	
755.0160+	.0000000+	.2500000+	.002089	2026.2
.2012664+	.2303424+	.1152771-	.6737705+	.0000116+
.0000000+	195.7208+	.0000000+	0000000+	.0020927+
.0000001+	.0000000+	.2012664+	.0000000+	.5727586-
0000000+	0000000+	40.0	1.000	
756.0160+	2.500000+	.2500000+	.002085	2026.2
.2641622+	.259921+	.0000004-	1.044152+	.0000116+
.0000000+	195.8939+	.0000000+	0000000+	.0020890+
.0000001+	.0000000+	.2641622+	.0000000+	.3051363-
0000000+	0000000+	40.0	1.000	
760.0160+	2.500000+	.2500000+	.002100	2024.8
.3307643+	.2934925+	.0434331-	1.126994+	141.1776+
.0595314+	138.5316+	1.019099+	5.551468+	.0020620+
5.78258+	1.583608+	.3121651+	.0562310+	.1313115-
16.78375+	5.551468+	20.0	1.010	
761.0160+	.0000000+	.2500000+	.002109	2024.8
.2276228+	.2588147+	.0977680-	.794814+	141.3000+
.0596331+	138.5316+	1.019984+	3.017053+	.0020577+
5.795312+	1.685069+	.2148128+	.0562771+	.4295177-
16.76970+	3.81703+	20.0	1.010	
762.0160+	2.500000-	.2500000+	.002109	2024.8
.1564906+	.2275201+	.1433496-	.6878101+	141.4224+
.0595293+	138.5316+	1.020867+	2.628798+	.0020542+
5.790237+	1.682137+	.1476932+	.0561847+	.9160282-
16.79843+	2.68796+	20.0	1.010	
763.0160+	2.500000-	.2500000+	.002077	2024.8
.1311836+	.2294877+	.1543007-	.5716322+	141.6669+
.0300513+	196.4810+	.7210210+	4.365287+	.0020471+
5.795102+	1.680645+	.1273554+	.0291745+	1.176228-
33.27641+	4.365287+	40.0	1.010	
764.0160+	.0000000+	.2500000+	.002068	2024.8
.2120466+	.2478638+	.1049881-	.555042+	141.7690+
.0300772+	196.8260+	.7203773+	7.050143+	.0020429+
5.807112+	1.682093+	.2058570+	.0291989+	.4951136-
33.24776+	7.050143+	40.0	1.010	

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765.0160+	2.500000+	.2500000+	.002063	2024.8
.3018997+	.2773511+	.0730611-	1.038510+	141.7870+
.0300772+	196.9983+	.7197474+	10.03749+	.0020429+
5.807112+	1.682093+	.2930845+	.0291989+	.2420046-
33.24776+	10.03749+	40.0	1.010	
766.0160+	2.500000+	.2500000+	.002059	2024.8
.4636317+	.1478636+	.1342966-	3.135535+	310.4817+
.1177593+	197.3424+	1.573340+	3.937113+	.0020905+
10.14627+	6.585790+	.4147867+	.1053530+	.2896622-
8.491897+	3.937113+	40.0	1.050	
767.0160+	.0000000+	.2500000+	.002054	2024.8
.3558103+	.3141033+	.0566916-	1.132781+	306.1502+
.1164545+	197.5142+	1.550015+	3.055357+	.0021006+
10.12679+	6.512822+	.3186966+	.1043075+	.1593316-
8.587037+	3.055357+	40.0	1.049	
768.0160+	2.500000-	.2500000+	.002050	2024.8
.228212+	.2816246+	.1039568-	.8103756+	306.1502+
.1156045+	197.6859+	1.548660+	1.974159+	.0020871+
10.11833+	6.465283+	.2045723+	.1036250+	.4555080-
8.650177+	1.974159+	40.0	1.049	
772.0160+	2.500000-	.2500000+	.002090	2024.8
.3272077+	.3019505+	.0851125-	1.023646+	301.5669+
.2276954+	139.0984+	2.168010+	1.437041+	.0021153+
10.08595+	6.434052+	.2665219+	.1854657+	.2601177-
4.391831+	1.437041+	20.0	1.048	
773.0160+	.0000000+	.2500000+	.002086	2024.8
.4516800+	.3245397+	.0314239-	1.233066+	301.3036+
.2357753+	139.2217+	2.164200+	1.915740+	.0021190+
10.434714+	6.662367+	.3655106+	.1907914+	.0695698-
4.41326+	1.915740+	20.0	1.048	
774.0160+	2.500000+	.2500000+	.002081	2024.8
.5406041+	.4305121+	.0235123+	1.255723+	301.3036+
.2278278+	139.3442+	2.162287+	2.372862+	.0021197+
10.07957+	6.437793+	.4402931+	.1855535+	.0435111+
4.339279+	2.372862+	20.0	1.048	
775.0160+	2.500000+	.2500000+	.002074	2024.8
1.081208+	.6690277+	.0322440-	1.616083+	725.8260+
1.283521+	139.7136+	5.195103+	.8423767+	.0023324+
21.42372+	36.26880+	.4734829+	.5620798+	.0298241-
.7791067+	.8423767+	20.0	1.303	

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776.0160+	.0000000+	.2500000+	.002074	2024.8
.8962648+	.6047469+	.1730483-	1.162049+	726.4346+
1.277410+	139.7136+	.199453+	.7016264+	.0023278+
21.34590+	36.09612+	.3835456+	.5609047+	.1930772-
.7828338+	.7016264+	20.0	1.303	

777.0160+	2.500000-	.2500000+	.002070	2024.8
.1501106-	.0715017+	.0175412-	.5763841-	726.4346+
1.276611+	139.8353+	5.194890+	.1225822-	.0023264+
21.34521+	36.07356+	.0167384-	.5607507+	.1127300+
.7833234+	.1225828-	20.0	1.303	

778.0160+	2.500000-	.1000000+	.002047	2022.6
.5966113+	.4012830+	.1190991-	1.466779+	726.8419+
.6436927+	197.7688+	3.70152+	.9268575+	.0023211+
21.36684+	35.99905+	3.9701+	.3916137+	.1996259-
1.553536+	.9268575+	40.0	1.303	

779.0160+	.0000000+	.2500000+	.002040	2022.6
.706056+	.4739328+	.055957-	1.50400+	726.4476+
.6434228+	198.1119+	3.66854+	1.119956+	.0023173+
21.37571+	35.98397+	.4384736+	.3915138+	.0771513-
1.554187+	1.119956+	40.0	1.303	

780.0160+	2.500000+	.2500000+	.002038	2022.6
.8535855+	.5512831+	.0127834-	1.948360+	726.4476+
.6434228+	198.2832+	3.663686+	1.316632+	.0023173+
21.37571+	35.98397+	.5193949+	.3915138+	.0149761-
1.554187+	1.36632+	40.0	1.303	

781.0160+	5.000000-	.1000000+	.002073	2019.1
.0452358+	.2182163+	.1603180-	.118008+	142.0328+
.0602545+	139.7130+	1.016604+	.7073423+	.0020316+
5.900429+	1.702629+	.0436032+	.0508302+	3.899958-
16.59625+	.7573423+	20.0	1.010	

790.0160+	2.500000-	.1000000+	.002071	2019.1
.156490+	.0444361+	.1368173-	.6402107+	142.1546+
.0603062+	139.8359+	1.016581+	2.504934+	.0020274+
5.912610+	1.704079+	.1475900+	.0568762+	.6742844-
16.58203+	2.594934+	20.0	1.010	

791.0160+	.0000000+	.1000000+	.002066	2019.1
.2418492+	.2791139+	.0549150-	.2664891+	141.9109+
.0603550+	139.9587+	1.013948+	4.006856+	.0020344+
5.907626+	1.705576+	.220824+	.0562230+	.391115-
16.56758+	4.006856+	20.0	1.010	

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792.0160+	2.500000+	.1500000+	.002062	2019.1
.3698870+	.3180207+	.0368201-	1.163090+	142.1546+
.0446828+	140.0815+	1.014799+	8.278054+	.0020274+
4.388846+	1.262615+	.3540663+	.0427716+	.0995442-
22.37995+	8.278054+	20.0	1.010	

793.0160+	5.000000+	.1500000+	.002057	2019.1
.4943682+	.3653855+	.0265309+	1.333004+	142.1546+
.0648370+	140.2041+	1.013911+	7.624786+	.0020274+
6.356822+	1.832116+	.4042666+	.0608891+	.0536824+
15.42329+	7.624786+	20.0	1.010	

794.0160+	5.000000+	.1500000+	.002037	2019.1
.4366763+	.3423089+	.0176073+	1.275680+	142.1546+
.0304705+	138.3062+	.7168439+	14.33111+	.0020274+
5.912610+	1.704089+	.4237640+	.0295695+	.0403213+
32.81861+	14.33111+	40.0	1.010	

795.0160+	2.500000+	.1500000+	.002030	2019.1
.3360431+	.2952999+	.0878465-	1.137974+	142.1546+
.0310230+	198.6490+	.7156069+	10.53203+	.0020274+
6.019833+	1.734992+	.3259317+	.0300896+	.1423822-
32.23405+	10.83203+	40.0	1.010	

796.0160+	.0000000+	.1500000+	.002025	2019.1
.2066575+	.2670947+	.0551885-	.7737.3+ +	142.2044+
.0322610+	198.3201+	.7454195+	6.405786+	.0020246+
6.012702+	1.804228+	.2001989+	.0312528+	.4122112-
30.99710+	6.405786+	40.0	1.011	

797.0160+	2.500000-	.1500000+	.002023	2019.1
.1042272+	.2418809+	.1033759-	.4309032+	142.2752+
.0309706+	198.9912+	.7149876+	3.365358+	.0020232+
6.016895+	1.732058+	.1010962+	.0300402+	1.433270-
32.28865+	3.365358+	40.0	1.010	

798.0160+	5.000000-	.1500000+	.002019	2019.1
.0033910+	.2256416+	.1067312-	.0233921+	142.2752+
.077683+	199.3328+	.7137623+	.1227557+	.0020239+
5.431730+	1.564155+	.0052443+	.0272074+	36.49300-
35.75466+	.1977557+	40.0	1.010	

799.0160+	5.000000-	.1500000+	.002005	2019.1
.2012664+	.2502570+	.1051327-	.7733371+	310.4867+
.1172420+	199.8441+	1.553644+	1.716674+	.0020855+
10.12583+	6.556862+	.1801458+	.1049388+	.3205028-
8.529361+	1.716674+	40.0	1.050	

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800.0160+	2.500000-	.1500000+	.002003	2019.1
.343312+	.2901716+	.1156803-	1.182855+	306.6803+
.1158047+	200.0143+	1.533791+	2.963878+	.0020877+
10.11527+	6.476479+	.3076086+	.1037858+	.3370333-
8.635224+	2.963878+	40.0	1.049	

801.0160+	.0000000+	.1500000+	.002003	2019.1
.4708198+	.3354709+	.0573782-	1.403459+	309.9509+
.1170397+	200.0143+	1.549643+	4.022734+	.0020913+
10.09780+	6.545548+	.4214888+	.1047767+	.1218688-
8.544105+	4.022734+	40.0	1.050	

802.0160+	2.500000+	.1500000+	.002003	2019.1
.6717696+	.3914540+	.0109524-	1.588359+	306.4153+
.1157046+	200.0143+	1.531967+	5.373763+	.0020913+
10.09780+	6.470884+	.5572887+	.1037054+	.0176150-
8.642691+	5.373763+	40.0	1.049	

803.0160+	5.000000+	.1500000+	.002003	2019.1
.7439671+	.4444456+	.0468160+	1.673921+	306.4153+
.1157046+	200.0143+	1.531967+	6.429878+	.0020920+
10.09436+	6.470884+	.6668137+	.1037054+	.0629275+
8.642691+	6.429878+	40.0	1.049	

809.0160+	5.000000+	.1500000+	.002132	2012.7
.8571421+	.5015593+	.1104826+	1.708954+	301.8756+
.2388770+	137.6987+	2.192291+	3.588214+	.0021561+
10.37024+	6.750014+	.6918702+	.1928174+	.1280964+
4.186253+	3.588214+	20.0	1.049	

810.0160+	2.500000+	.1500000+	.002130	2012.7
.6935382+	.4533487+	.0592924+	1.529811+	301.8756+
.2388770+	137.8238+	2.190300+	2.903327+	.0021554+
10.37378+	6.750014+	.5598119+	.1928174+	.0054926+
4.186253+	2.903327+	20.0	1.049	

811.0160+	.0000000+	.1500000+	.002119	2012.7
.5975098+	.3848389+	.0108870+	1.552623+	299.5535+
.2271629+	138.1985+	2.167559+	2.630314+	.0021547+
9.944941+	6.419004+	.4869034+	.1851122+	.0195825+
4.402127+	2.630314+	20.0	1.048	

812.0160+	2.500000-	.1500000+	.002119	2012.7
.4908116+	.322497+	.0811660-	1.523078+	302.1445+
.2390898+	138.1985+	2.186308+	2.052833+	.0021516+
10.39228+	6.756027+	.3961066+	.1929560+	.1653711-
4.182527+	2.052833+	20.0	1.049	

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813.0160+	5.000000-	.1500000+	.002114	2012.7
.3236511+	.2664269+	.1056688-	1.214783+	302.1445+
.2291277+	138.3231+	2.184337+	1.412535+	.0021516+
9.959268+	6.474526+	.2633177+	.1864149+	.3264898-
4.364376+	1.412535+	20.0	1.049	

814.0160+	5.000000-	.1500000+	.002089	2012.7
1.159079+	.3585479+	.1765914-	3.232703+	715.4679+
.6356845+	195.8410+	3.653309+	1.823356+	.0023804+
20.87376+	35.55120+	.7086203+	.3886351+	.1523549-
1.573107+	1.823356+	40.0	1.303	

815.0160+	2.500000-	.1500000+	.002080	2012.7
1.024302+	.434797+	.1215023-	2.368440+	716.0823+
.6362304+	196.1891+	3.649958+	1.609955+	.0023749+
20.92211+	35.58173+	.6260136+	.3888391+	.1186195-
1.571757+	1.609955+	40.0	1.303	

816.0160+	.0000000+	.1500000+	.002080	2012.7
1.180643+	.4961551+	.0577574-	2.379585+	716.6962+
.6327960+	196.1891+	3.653087+	1.865756+	.0023673+
20.85810+	35.38965+	.7230808+	.387536+	.0489202-
1.580288+	1.865756+	40.0	1.302	

817.0160+	2.500000+	.1500000+	.002076	2012.7
1.302841+	.5508561+	.0223455-	2.365120+	716.6962+
.6407557+	196.3630+	3.649853+	2.033288+	.0023694+
21.10157+	35.83481+	.7940493+	.3905247+	.0171513-
1.560657+	2.033288+	40.0	1.303	

818.0160+	5.000000+	.1500000+	.002069	2012.7
1.394489+	.6021383+	.0352298+	2.315895+	717.9223+
.6378652+	196.7102+	3.649643+	2.186181+	.0023621+
21.03605+	35.67316+	.8514065+	.3894491+	.0252636+
1.567729+	2.186181+	40.0	1.304	

819.0160+	5.000000+	.1500000+	.002080	2012.7
1.372850+	.4609609+	.0265253+	2.378235+	717.9223+
1.267964+	139.4402+	5.148603+	1.082719+	.0023614+
21.13438+	35.82923+	.6053224+	.5590760+	.0193213+
.7886653+	1.082719+	20.0	1.300	

820.0160+	2.500000+	.1500000+	.002089	2012.7
1.280378+	.4068297+	.0201736-	3.147209+	717.9223+
1.267964+	139.1927+	5.157756+	1.009790+	.0023621+
21.12808+	35.82923+	.5645494+	.5590760+	.0157560-
.7886653+	1.009790+	20.0	1.300	

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821.0160+	.0000000+	.1500000+	.002089	2012.7
1.47437+	.3484695+	.0507779-	4.235433+	719.1464+
1.267755+	139.1927+	5.166550+	1.161450+	.0023533+
21.16692+	35.8233+	.6492917+	.5590353+	.0412771-
.7887954+	1.161450+	20.0	1.300	

822.0160+	2.500000-	.1500000+	.002091	2012.7
1.049198+	.3087169+	.1067809-	3.398578+	719.1464+
1.268546+	139.0608+	5.171153+	.8270877+	.0023547+
21.16749+	35.84565+	.4624983+	.5591890+	.1017738-
.7883040+	.8270877+	20.0	1.300	

823.0160+	5.000000-	.1500000+	.002089	2012.7
.9922931+	.2723475+	.1701155-	3.643480+	719.1464+
1.268546+	139.1927+	5.166550+	.7822287+	.0023547+
21.16749+	35.84565+	.4374137+	.5591890+	.1714367-
.7883040+	.7822287+	20.0	1.300	

834.0160+	5.000000+	.1000000+	.002096	2012.7
.6650823+	.3620023+	.0227513+	1.837240+	140.8094+
.0702508+	138.9441+	1.013419+	9.466203+	.0020606+
6.842302+	1.985326+	.6214247+	.0650462+	.0342001+
14.23302+	9.466203+	20.0	1.010	

835.0160+	2.500000+	.1000000+	.002089	2012.7
.5014615+	.3154833+	.0220055+	1.589565+	140.9322+
.0703202+	139.1927+	1.012497+	7.131398+	.0020563+
6.856640+	1.987057+	.4685340+	.0657001+	.0454763+
14.22066+	7.131398+	20.0	1.010	

836.0160+	.0000000+	.1000000+	.002091	2012.7
.3592172+	.2765765+	.0080000-	1.298798+	141.0549+
.0702264+	139.0608+	1.014281+	5.115129+	.0020534+
6.851061+	1.984407+	.3356460+	.0656182+	.0953337-
14.23965+	5.115129+	20.0	1.010	

837.0160+	2.500000-	.1000000+	.002089	2012.7
.1813869+	.2452819+	.0900484-	.7395036+	141.0549+
.0610799+	139.1927+	1.013378+	2.969664+	.0020527+
5.960843+	1.759527+	.1709455+	.0575639+	.4964439-
16.37198+	2.969664+	20.0	1.010	

838.0160+	5.000000-	.1000000+	.002089	2012.7
.0213390+	.2224453+	.1872385-	.0959320+	141.1776+
.0609777+	139.1927+	1.014281+	.3499571+	.0020457+
5.953972+	1.723007+	.0201131+	.057473+	8.774214-
16.39933+	.3499571+	20.0	1.010	

G.E.M.
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839.0160+	5.000000+	.1000000+	.002067	2012.7
.0395344-	.2303424+	.1949272-	.1716335-	147.0000+
.0292354+	196.8940+	.7468912+	1.352281-	.0020451+
5.425617+	1.635014+	.0984115-	.0284044+	4.930544+
34.20510+	1.352281-	40.0	1.011	

840.0160+	2.500000-	.1000000+	.002064	2012.7
.0952421+	.2410262+	.1455233-	.3951526+	141.1776+
.0279875+	197.0672+	.7163928+	3.403014+	.0020484+
5.412354+	1.565229+	.0926491+	.0272256+	1.527929-
35.73012+	3.403014+	40.0	1.010	

841.0160+	.0000000+	.1000000+	.002048	2012.7
.2551771+	.2619664+	.0838469-	.9740831+	141.1776+
.0308098+	197.7587+	.7138880+	8.282318+	.0020484+
5.958137+	1.73068+	.2475501+	.0298889+	.3285832-
32.45713+	8.282318+	40.0	1.010	

842.0160+	2.500000+	.1000000+	.002048	2012.7
.4007359+	.2995734+	.0248390-	1.337688+	141.1776+
.0279875+	197.7587+	.7138880+	14.31834+	.0020484+
5.412354+	1.565229+	.388256+	.0272256+	.0619835-
35.73012+	14.31834+	40.0	1.010	

843.0160+	5.000000+	.1000000+	.002037	2012.7
.5876262+	.3576932+	.0309265+	1.642821+	141.1776+
.0308098+	198.2757+	.7120264+	19.07266+	.0020491+
5.956054+	1.73068+	.5700626+	.0298889+	.0526296+
32.45713+	19.07266+	40.0	1.010	

844.0160+	5.000000+	.1000000+	.002035	2012.7
.9703919+	.4435902+	.1018159+	2.187583+	305.3532+
.1190016+	198.4472+	1.538701+	8.094561+	.0021001+
10.45464+	6.704492+	.8665127+	.1070486+	.1049225+
8.341544+	8.094561+	40.0	1.040	

845.0160+	2.500000+	.1000000+	.002030	2012.7
.8158480+	.3884625+	.0447159+	2.180197+	276.6835+
.1087797+	198.6196+	1.393031+	7.499998+	.0021075+
10.4395+	6.083600+	.7350071+	.0981076+	.0548092+
9.192886+	7.499998+	40.0	1.040	

846.0160+	.0000000+	.1000000+	.002028	2012.7
.6082920+	.3376077+	.0444352-	1.801771+	273.1653+
.1026945+	198.7914+	1.374135+	5.923313+	.0021060+
9.982981+	5.743280+	.5516414+	.0931305+	.0730492-
9.737614+	5.93313+	40.0	1.039	

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847.0160+	2.500000-	.1000000+	.002024	2012.7
.410619+	.2952999+	.1021543-	1.390517+	273.1603+
.1026945+	198.9630+	1.372950+	3.998455+	.0021060+
9.82981+	5.743280+	.3733783+	.0931305+	.2487809-
9.737614+	3.990455+	40.0	1.039	

848.0160+	5.000000-	.1000000+	.002024	2012.7
.2102515+	.2070947+	.1570646-	.7871799+	276.6835+
.1012512+	198.9630+	1.390627+	2.076534+	.0021075+
9.710901+	5.662560+	.1309206+	.0919419+	.7470319-
9.876424+	2.076534+	40.0	1.040	

849.0160+	5.000000-	.1000000+	.002042	2012.7
.3983399+	.2748849+	.1418968-	1.449114+	276.6835+
.2003930+	140.7934+	1.965173+	1.987793+	.0021089+
9.704256+	5.662560+	.3318412+	.1669395+	.3562204-
4.990193+	1.987793+	20.0	1.040	

850.0160+	2.500000-	.1000000+	.002041	2012.7
.6188495+	.3239413+	.0705409-	1.910375+	273.1663+
.1978456+	140.6709+	1.941881+	3.127940+	.0021067+
9.714227+	5.590576+	.5166354+	.1651679+	.1269145-
5.054444+	3.127940+	20.0	1.039	

851.0160+	.0000000+	.1000000+	.002041	2012.7
.8749251+	.3916053+	.0204340-	2.234201+	273.1663+
.1978456+	140.6709+	1.941881+	4.422261+	.0021075+
9.710901+	5.590578+	.7304156+	.1651679+	.0233552-
5.054444+	4.422261+	20.0	1.039	

852.0160+	2.500000+	.1000000+	.002041	2012.7
1.084764+	.4584235+	.0234632+	2.366294+	276.6835+
.2003930+	140.6709+	1.966884+	5.413187+	.0021082+
9.707578+	5.662560+	.9036748+	.1669395+	.0216297+
4.990193+	5.413187+	20.0	1.040	

853.0160+	5.000000+	.1000000+	.002046	2012.7
1.198576+	.5040967+	.0901811+	2.377671+	302.4760+
.2190737+	140.6709+	2.150230+	5.471104+	.0021075+
9.710901+	6.190426+	.9831861-	.1797050-	.0752426+
4.564673+	5.471109+	20.0	1.039	

864.0160+	5.000000+	.1000000+	.002066	2009.9
2.233548+	.4186709+	.1676182+	5.334854+	717.4035+
1.259952+	139.9089+	5.127645+	1.772724+	.0023386+
21.22065+	35.60282+	.9883166+	.5575128+	.0750457+
.793680+	1.772724+	20.0	1.298	

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865.0160+	2.500000+	.1000000+	.002064	2009.9
2.379369+	.348469+	.1093247+	6.828055+	717.4035+
1.259952+	140.0322+	5.123129+	1.868419+	.0023386+
21.22063+	35.60282+	1.052840+	.5575124+	.0459469+
.793680+	1.888459+	20.0	1.298	

866.0160+	.0000000+	.1000000+	.002062	2009.9
2.365143+	.2765765+	.0790576-	8.551495+	718.0102+
1.259439+	140.1554+	5.122954+	1.877932+	.0023339+
21.23624+	35.58833+	1.046783+	.5574124+	.0334261-
.7940038+	1.877931+	20.0	1.298	

867.0160+	2.500000-	.1000000+	.002062	2009.9
2.034373+	.1979171+	.1329022-	10.27834+	718.0102+
1.259439+	140.1554+	5.122954+	1.615304+	.0023311+
21.26169+	35.58833+	.9003902+	.5574124+	.0653301-
.7940038+	1.615304+	20.0	1.298	

868.0160+	5.000000-	.1000000+	.002062	2009.9
1.863661+	.1784637+	.2197375-	10.44280+	718.0102+
1.258650+	140.1554+	5.122954+	1.480682+	.0023325+
21.23567+	35.56603+	.8251217+	.5572577+	.1179063-
.7945016+	1.480682+	20.0	1.298	

869.0160+	5.000000-	.1000000+	.002035	2009.9
.9865651+	.2820520+	.1874135-	3.497812+	718.0102+
.6307665+	198.4153+	3.618723+	1.564073+	.0023332+
21.05630+	35.27615+	.6049702+	.3867914+	.1899657-
1.585372+	1.564073+	40.0	1.298	

870.0160+	2.500000-	.1000000+	.002028	2009.9
1.168064+	.3132486+	.1245796-	3.728872+	717.4035+
.6310303+	198.7594+	3.607405+	1.851043+	.0023379+
21.04102+	35.29070+	.7161512+	.3868906+	.1066547-
1.584709+	1.851043+	40.0	1.298	

871.0160+	.0000000+	.1000000+	.002021	2009.9
1.304638+	.3418812+	.0692156-	3.816056+	718.0102+
.6307665+	199.1030+	3.604223+	2.068337+	.0023332+
21.05630+	35.27615+	.8000152+	.3867914+	.0330535-
1.585372+	2.068337+	40.0	1.298	

872.0160+	2.500000+	.1000000+	.002016	2009.9
1.389098+	.3773514+	.0420234-	3.681179+	718.0102+
.6307665+	199.2746+	3.603119+	2.202238+	.0023332+
21.05630+	35.27615+	.8518068+	.3867914+	.0302523-
1.585372+	2.202238+	40.0	1.298	

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873.0160+	5.000000+	.1000000+	.002016	2009.9
1.410662+	.4059839+	.0250448+	3.474675+	718.0102+
.6307665+	199.2746+	3.603119+	2.236425+	.0023332+
21.05630+	35.27615+	.8650302+	.3867914+	.0177539+
1.585372+	2.236425+	40.0	1.298	
874.0160+	2.500000+	.0500000+	.002122	2005.7
.5512739+	.2943383+	.0344848+	1.872925+	.0001151+
.0000000+	138.0739+	.0000008+	0000000+	.0021240+
.0000000+	.0000000+	.5512739+	.0000000+	.0625549+
0000000+	0000000+	20.0	1.003	
875.0160+	.0000000+	.0500000+	.002118	2005.7
.1493774+	.2512025+	.0480120+	.5946494+	.0001151+
.0000000+	138.1992+	.0000008+	0000000+	.0021277+
.0000000+	.0000000+	.1493774+	.0000000+	.3214142-
0000000+	0000000+	20.0	1.006	
876.0160+	2.500000-	.0500000+	.002111	2005.7
.1564906-	.2190621+	.1495166-	.7143664-	.0001151+
.0000000+	138.4493+	.0000008+	0000000+	.0021285+
.0000000+	.0000000+	.1564906-	.0000000+	1.083237+
0000000+	0000000+	20.0	1.007	
877.0160+	2.500000-	.0500000+	.002089	2005.7
.1599349-	.2239322+	.1954546-	.7142115-	.0001151+
.0000000+	195.8367+	.0000005+	0000000+	.0021360+
.0000000+	.0000000+	.1599349-	.0000000+	1.222088+
0000000+	0000000+	40.0	1.013	
878.0160+	.0000000+	.0500000+	.002082	2005.7
.1868903+	.2444450+	.0849639-	.7645402+	.0001152+
.0000000+	196.1861+	.0000005+	0000000+	.0021299+
.0000000+	.0000000+	.1868903+	.0000000+	.4546195-
0000000+	0000000+	40.0	1.010	
879.0160+	2.500000+	.0500000+	.002082	2005.7
.6020024+	.3021375+	.0124356+	1.992478+	.0001154+
.0000000+	0000000+	0000000+	0000000+	.0021148+
.0000000+	.0000000+	.6020024+	.0000000+	.0206572+
0000000+	0000000+	40.0	1.005	
880.0160+	2.500000+	.0500000+	.002089	2005.7
.7421701+	.1081199+	.1078202-	6.364322+	146.9440+
.0341898+	197.2306+	.7450366+	21.70730+	.0020795+
6.257352+	1.912098+	.7176343+	.0330595+	.1452774-
29.4841+	21.70730+	40.0	1.011	

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881.0160+	.0000000+	.0500000+	.002057	2005.7
.3629984+	.2713682+	.0384608-	1.337660+	126.1743+
.0250132+	197.4041+	.6391678+	14.51222+	.0020685+
5.359678+	1.398890+	.3541402+	.0241029+	.1059533-
39.97873+	14.51222+	40.0	1.008	

882.0160+	2.500000-	.0500000+	.002053	2005.7
.2156426+	.2559835+	.1239901-	.8424081+	153.1795+
.0330888+	197.5775+	.7752881+	6.517076+	.0020685+
5.840123+	1.850522+	.2087358+	.030270+	.574977-
30.72164+	6.517076+	40.0	1.012	

883.0160+	2.500000-	.0500000+	.002059	2005.7
.2525190+	.2672727+	.1040163-	.9447990+	126.3963+
.0538989+	140.1877+	.9016216+	4.685048+	.0020620+
5.843543+	1.523036+	.2396046+	.0511424+	.4119149-
18.55324+	4.685048+	20.0	1.008	

884.0160+	.0000000+	.0500000+	.002073	2005.7
.5228211+	.2934925+	.0210931-	1.781377+	133.4183+
.0595326+	139.6932+	.9550006+	8.782005+	.0020635+
6.110344+	1.682231+	.4334450+	.0561876+	.0403447-
16.79749+	8.782005+	20.0	1.009	

885.0160+	2.500000+	.0500000+	.002073	2005.7
.8749251+	.3467779+	.0352944+	2.523012+	147.4623+
.0735705+	139.6932+	1.055615+	11.89104+	.0020649+
6.827958+	2.079128+	.8149615+	.0685357+	.0403399+
13.59092+	11.89104+	20.0	1.011	

892.0160+	2.500000+	.0500000+	.002082	2005.7
1.387076+	.3315535+	.0716869+	4.183566+	285.9768+
.7244104+	139.4380+	2.050924+	6.180980+	.0021166+
10.47602+	6.341226+	1.132852+	.182803+	.0516820+
4.456121+	6.180980+	20.0	1.047	

893.0160+	.0000000+	.0500000+	.002082	2005.7
1.248368+	.3104005+	.0947938+	4.021695+	285.9768+
.2130956+	139.4380+	2.050924+	5.858257+	.0021159+
9.951244+	6.021500+	1.029077+	.1756626+	.0278714+
4.692729+	5.858257+	20.0	1.047	

894.0160+	2.500000-	.0500000+	.002082	2005.7
1.059868+	.2579689+	.0517692+	4.108512+	306.7165+
.2393368+	139.4380+	2.199662+	4.428756+	.0021240+
10.38111+	6.763007+	.8551902+	.1931168+	.0488449-
4.178212+	4.428756+	20.0	1.050	

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895.0160+ .6253637+ .1100258+ 9.898683+ 9.088776+	2.500000+ .2752143+ 197.2306+ 6.153287+ 5.683790+	.0500000+ .0752678- 1.492703+ .5633776+ 40.0	2.272270+ 5.683790+ .0991200+ 1.046	294.4083+ .0021114+ .1203582-
896.0160+ .9416396+ .1178341+ 10.34396+ 8.456500+	.0000000+ .3123939+ 197.7507+ 6.589978+ 7.991225+	.0500000+ .0002424+ 1.524224+ .8423786+ 40.0	.002048 3.014269+ 7.991225+ .1054129+ 1.046	2005.7 301.4166+ .0021136+ .0002575+
897.0160+ 2.399024- .1194856+ 10.3919+ 8.399024-	2.500000+ .355650+ 198.0968+ 6.685330+ 20.07192-	.0500000+ .0040588- 1.524224+ 2.142970- 40.0	.002041 6.804482- 20.07792- .1054129+ 1.046	2005.7 303.4856+ .0021188+ .0002575+
901.0160+ 4.545342+ 1.267816+ 21.22819+ .7887579+	2.500000- .0482105+ 139.0444+ 35.82502+ 3.585175+	.0500000+ .7604813- 5.185238+ 2.004281+ 20.0	.002092 94.8099+ 3.585175+ .5590471+ 1.298	2013.5 720.9786+ .0023407+ .1673100-
902.0160+ 5.530522+ 1.275739+ 21.32270+ .7838587+	.0000000+ .2300575+ 139.1683+ 36.04893+ 4.335148+	.0500000+ .0224797- 5.180623+ 2.430208+ 20.0	.002090 24.03973+ 4.335148+ .5605824+ 1.300	2013.5 720.9786+ .0023449+ .0040645-
903.0160+ 4.972135+ 1.275739+ 21.32270+ .7838587+	2.500000+ .4440449+ 139.1683+ 36.04893+ 3.897455+	.0500000+ .1743914+ 5.180623+ 2.124843+ 20.0	.002090 11.19736+ 3.897452+ .5605824+ 1.300	2013.5 720.9786+ .0023449+ .0350737+
904.0160+ 2.587711+ .6411225+ 21.23244+ 1.559764+	2.500000+ .3239324+ 196.5021+ 35.85532+ 4.03620+	.0500000+ .0818424+ 3.672164+ 1.576793+ 40.0	.002072 7.988430+ 4.036220+ .3906609+ 1.299	2013.5 721.5883+ .002340+ .0316273+
905.0160+ 2.650607+ .6411225+ 21.3244+ 1.559764+	.0000000+ .2645306+ 196.8490+ 35.8553+ 4.134323+	.0500000+ .0364525- 3.665693+ 1.615118+ 40.0	.002068 10.02004+ 4.134323+ .3906609+ 1.300	2013.5 721.5883+ .002340+ .0137525-

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906.0160+	2.500000-	.0500000+	.002061	2013.5
2.266044+	.2034193+	.0721221-	11.13977+	721.5089+
.6411225+	197.1953+	3.659257+	3.534496+	.0023381+
21.25143+	35.85532+	1.380789+	.3986689+	.0318273-
1.559764+	3.534496+	40.0	1.299	

910.0160+	2.500000-	.0300000+	.002089	2012.7
.3165379+	.250483+	.0518577-	1.255861+	126.8390+
.0487904+	139.1927+	.9112474+	6.487701+	.0020498+
5.302642+	1.378885+	.3018124+	.0465206+	.1638279-
20.49580+	6.487701+	20.0	1.008	

911.0160+	.0000000+	.0300000+	.002089	2012.7
1.632000+	.2841887+	.01803+	2.052450+	134.1187+
.0507188+	139.1927+	.9635809+	11.63851+	.0020427+
5.169087+	1.416160+	.5554463+	.0477242+	.0020887+
19.95344+	11.63851+	20.0	1.009	

912.0160+	2.500000+	.0300000+	.002089	2012.7
.9318308+	.3442405+	.0829471+	2.706917+	134.2350+
.0560613+	139.1927+	.9643826+	16.62162+	.0020398+
5.785215+	1.584140+	.8823643+	.0330853+	.0890152+
17.1370+	16.62162+	20.0	1.009	

913.0160+	2.500000+	.0300000+	.002054	2012.7
.8823378+	.3299153+	.0438757+	2.674436+	141.6669+
.0298939+	197.4237+	.7175781+	29.51557+	.0020293+
5.815294+	1.671846+	.8567269+	.0290262+	.0497267+
33.45155+	29.51557+	40.0	1.010	

914.0160+	.0000000+	.0300000+	.002050	2012.7
.4708198+	.2739323+	.0249288-	1.718744+	127.6101+
.0240932+	197.5965+	.6458115+	19.54155+	.0020244+
5.215787+	1.347436+	.4597431+	.0235264+	.0529478-
41.5053+	19.54155+	40.0	1.008	

915.0160+	2.500000-	.0300000+	.002048	2012.7
.2839295+	.2645306+	.0511470-	1.073333+	127.6101+
.0226760+	197.7691+	.6452477+	12.52114+	.0020244+
4.908976+	1.268175+	.2776338+	.0221732+	.1801401-
44.09947+	12.52114+	40.0	1.008	

G.E.M.
FORCE

930.0160+	2.500000-	.0300000+	.002061	2012.7
6.421452+	.0076121-	.1419863-	843.5739-	724.0220+
1.266802+	140.1725+	5.165219+	5.069026+	.0023245+
21.26902+	35.79637+	2.832824+	.5588498+	.0251199-
.7693893+	5.069026+	20.0	1.299	

931.0160+	2.500000-	.0300000+	.002037	2012.7
3.330780+	.1581200+	.0864371-	21.06488+	724.0220+
.6396663+	198.2653+	3.651783+	5.207059+	.0023238+
21.26200+	35.77388+	2.031377+	.390119+	.0259510-
1.563315+	5.207059+	40.0	1.299	

932.0160+	.0000000+	.0300000+	.002028	2012.7
4.023329+	.2367527+	.0377530+	17.00225+	724.6292+
.6216927+	198.7809+	3.645365+	6.474789+	.0023206+
20.67574+	34.78870+	2.462177+	.3833603+	.0093801+
1.608511+	6.474789+	40.0	1.299	

933.0160+	2.500000+	.0300000+	.002019	2012.7
3.592247+	.3564111+	.1566048+	10.07894+	724.6292+
.6418123+	199.1239+	3.639037+	5.597037+	.0023199+
21.35123+	35.89390+	2.187976+	.3909169+	.0435952+
1.558087+	5.597037+	40.0	1.299	

934.0160+	.0000000+	.0100000+	.002065	2012.7
.4979248+	.3696145+	.1295125+	1.347146+	.0001171+
.0000000+	140.0495+	.0000008+	0000000+	.0020569+
.0000000+	.0000000+	.4979248+	.0000000+	.2601046+
0000000+	0000000+	20.0	1.000	

935.0160+	.0000000+	.0100000+	.002037	2012.7
.5139483+	.3700864+	.1111347+	1.388725+	.0001169+
.0000000+	198.2653+	.0000005+	0000000+	.0020642+
.0000000+	.0000000+	.5139483+	.0000000+	.2299741+
0000000+	0000000+	40.0	1.000	

936.0160+	.0000000+	.0000000+	.002024	2012.7
.7475612+	.2611200+	.0000000+	1.963286+	133.4183+
.0310428+	140.0495+	.0000000+	24.08161+	.0020678+
6.292747+	1.736096+	.7255555+	.0301081+	.1978703+
32.21317+	24.08161+	40.0	1.009	

937.0160+	.0000000+	.0100000+	.002036	2012.7
.9140477+	.2780000+	.0000000+	2.319078+	126.6178+
.0383073+	141.0306+	.0000000+	15.67638+	.0020598+
6.317039+	1.647601+	.8656884+	.0550948+	.1833250+
17.15050+	15.67638+	20.0	1.008	

G.E.M.
FORCE

940.0160+	.0000000+	.0100000+	.002199	2028.3
2.643671+	.2148331+	.0025047+	12.33362+	294.2174+
.2457213+	135.6640+	2.168708+	10.73953+	.001223+
10.30800+	6.771673+	2.15311+	.1978911+	.0009453+
4.053155+	10.73953+	20.0	1.047	
941.0150+	.0000000+	.0100000+	.002165	2028.3
1.583176+	.2414536+	.0133884+	6.556855+	300.7275+
.1262772+	192.3010+	1.56400+	12.53723+	.001113+
10.76338+	7.06202+	1.405671+	.1121197+	.0004567+
7.919038+	12.53723+	40.0	1.049	
942.0160+	.0000000+	.0100000+	.002140	2028.3
6.453106+	.2264963+	.1022224+	28.49100+	707.0641+
.6348930+	193.5298+	3.653516+	10.16400+	.0004224+
20.72088+	35.50693+	3.047112+	.3883391+	.0158405+
1.570668+	10.16400+	40.0	1.297	
944.0160+	.0000000+	.0100000+	.002165	2028.3
12.26317+	.209919+	.1345776+	60.41113+	711.3479+
1.270425+	136.6697+	5.204867+	9.652810+	.003240+
21.07938+	35.49876+	5.401268+	.5595539+	.0109741+
.7871376+	9.652810+	20.0	1.297	

TABULATED FORCE AND ~~MOMENT~~ DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT

AND A JET CONVERGENCE ANGLE OF 60°

Key for Reading Following Data:

RUN. NO.	α	h/D	ρ	BP
C_I	C_D	C_M	L/D	V_j
C_μ	V_o	V_j/V_o	A	ρ_l
Q	ΔV_j	CL'	C_μ'	C_M/CL
$1/C_\mu$	A	q	P_M/P_o	

February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE

945.0560+	.0000000+	.0100000+	.002200	2019.8
.4145663+	.2554315+	.0147140+	1.615173+	.0001111+
.0000000+	95.85743+	.0000011+	0000000+	.0021746+
.0000000+	.0000000+	.4125663+	.0000000+	.0356647+
0000000+	0000000+	10.0	1.000	

946.0560+	.0000000+	.0100000+	.002192	2019.8
.4090097+	.2435903+	.0041723+	1.679086+	.0001141+
.0000000+	135.8303+	.0000000+	0000000+	.0021746+
.0000000+	.0000000+	.4090097+	.0000000+	.0102183+
0000000+	0000000+	20.0	1.000	

947.0560+	.0000000+	.0100000+	.002173	2019.8
.4079240+	.2465818+	.0066957-	1.654314+	.0001141+
.0000000+	192.0077+	.0000000+	0000000+	.0021746+
.0000000+	.0000000+	.4079240+	.0000000+	.0164143-
0000000+	0000000+	40.0	1.000	

948.0560+	.0000000+	.0100000+	.002143	2019.8
.9955500+	.2717955+	.0099945-	3.662864+	137.1999+
.0304751+	193.2436+	.7099841+	32.66763+	.0021772+
5.704407+	1.704357+	.9661080+	.0295735+	.0100392-
35.81304+	32.66763+	40.0	1.010	

949.0560+	.0000000+	.0100000+	.002156	2019.8
1.251925+	.2748849+	.0931783+	4.554351+	130.8182+
.031976+	136.2638+	.9551302+	23.5339+	.0021606+
5.318150+	1.503191+	1.188691+	.0505096+	.0744280+
12.79018+	23.5339+	20.0	1.009	

950.0560+	.0000000+	.0100000+	.002168	2019.8
1.991629+	.528000+	.266500+	7.358786+	138.2051+
.1124000+	96.66034+	1.429801+	17.71960+	.0021457+
5.355112+	1.548071+	1.790451+	.1010434+	.0661678+
8.896720+	17.71960+	10.0	1.010	

953.0560+	.0000000+	.0100000+	.002177	2019.8
7.255477+	.3484695+	.7564532+	20.82097+	299.4443+
.2435352+	96.31245+	3.104480+	29.79231+	.0021658+
5.254417+	3.140220+	5.834556+	.1958410+	.1042596+
4.104182+	29.79231+	10.0	1.049	

954.0560+	.0000000+	.0100000+	.002167	2019.8
3.851804+	.2960299+	.3915345+	13.01153+	295.9892+
.1203626+	136.7127+	2.165045+	32.00167+	.0021861+
5.256214+	3.401118+	3.437998+	.1074318+	.1016496+
8.308228+	32.00167+	20.0	1.048	

G.E.M.
FORCE

955.0560+	.0000000+	.0100000+	.002139	2019.8
2.266044+	.2730776+	.2260545+	8.298171+	299.4443+
.0565361+	193.4196+	1.548159+	40.08131+	.0021868+
4.828383+	3.161235+	2.144786+	.033100+	.0997573+
17.68777+	40.08131+	40.0	1.049	

956.0560+	2.500000+	.0300000+	.002175	2019.8
.7255477+	.3400115+	.0494712+	2.133891+	.0001147+
.0000000+	96.48249+	.0000011+	0000000+	.0021508+
.0000000+	.0000000+	.7255477+	.0000000+	.0581847+
0000000+	0000000+	10.0	1.000	

957.0560+	.0000000+	.0300000+	.002170	2019.8
.1564906+	.2588117+	.0483696-	.6046435+	.0001147+
.0000000+	96.57146+	.0000011+	0000000+	.0021508+
.0000000+	.0000000+	.1564906+	.0000000+	.3090890-
0000000+	0000000+	10.0	1.000	

958.0560+	2.500000-	.0300000+	.002170	2019.8
.1991699+	.2503567+	.0829080-	.7955444+	.0000114+
.0000000+	96.57146+	.0000001+	0000000+	.0021508+
.0000000+	.0000000+	.1991699+	.0000000+	.4157636-
0000000+	0000000+	10.0	1.000	

959.0560+	2.500000-	.0300000+	.002156	2019.8
.1636038+	.2376697+	.0701260-	.6883664+	.0001148+
.0000000+	136.9638+	.0000008+	0000000+	.0021469+
.0000000+	.0000000+	.1636038+	.0000000+	.4284329-
0000000+	0000000+	20.0	1.000	

960.0560+	.0000000+	.0300000+	.002149	2019.8
.1956133+	.2444361+	.0442978-	.8002634+	.0001147+
.0000000+	137.2144+	.0000008+	0000000+	.0021508+
.0000000+	.0000000+	.1956133+	.0000000+	.7264561-
0000000+	0000000+	20.0	1.000	

961.0560+	2.500000+	.0300000+	.002149	2019.8
.8037930+	.3214039+	.0518980+	2.500880+	.0001147+
.0000000+	137.2144+	.0000008+	0000000+	.0021508+
.0000000+	.0000000+	.8037930+	.0000000+	.0645624+
0000000+	0000000+	20.0	1.000	

962.0560+	2.500000+	.0300000+	.002132	2019.8
2.578726+	.3294880+	.0524934+	7.826465+	.0001148+
.0000000+	193.7709+	.0000005+	0000000+	.0021469+
.0000000+	.0000000+	2.578726+	.0000000+	.0203563+
0000000+	0000000+	40.0	1.000	

G.E.M
FORCE

963.0560+	.0000000+	.0300000+	.002130	2019.8
.2264247+	.2410200+	.0574147-	.9301190+	.0001148+
.0000000+	192.2434+	.0000005+	0000000+	.0021489+
.0000000+	.0000000+	.2264247+	.0000000+	.2535708-
0000000+	0000000+	40.0	1.000	

964.0560+	2.500000-	.0300000+	.002116	2019.8
.2012674+	.2478637+	.0431451+	.8120040+	.0001149+
.0000000+	194.4717+	.0000005+	0000000+	.0021430+
.0000000+	.0000000+	.2012664+	.0000000+	.2143681+
0000000+	0000000+	40.0	1.000	

965.0560+	2.500000-	.0300000+	.002109	2019.8
.6000565+	.2752143+	.0079075-	2.507341+	144.9838+
.0486281+	194.8212+	.741892+	14.19046+	.0021458+
8.741250+	2.719572+	.6580561+	.0463731+	.0115752-
20.56420+	14.19046+	40.0	1.011	

966.0560+	.0000000+	.0300000+	.002102	2019.8
.7224029+	.2948725+	.0191904+	2.449881+	123.3444+
.0317126+	195.1700+	.6319045+	22.77966+	.0021373+
6.727330+	1.77355+	.7001978+	.0307378+	.0265647+
31.53318+	22.77966+	40.0	1.008	

967.0560+	2.500000+	.0300000+	.002102	2019.8
2.781790+	.3620214+	.1233638+	7.667105+	138.5801+
.0257796+	195.1700+	.7100482+	107.9063+	.0021333+
4.876597+	1.441750+	2.711878+	.0251317+	.0443469+
38.79025+	107.9063+	40.0	1.010	

968.0560+	2.500000+	.0300000+	.002117	2019.8
1.095434+	.3552359+	.1412287+	3.083682+	132.0064+
.0571617+	138.2123+	.9550988+	19.16377+	.0021204+
5.770405+	1.615234+	1.036203+	.0548709+	.1289248+
17.49422+	19.16377+	20.0	1.009	

969.0560+	.0000000+	.0300000+	.002122	2019.8
1.002563+	.3129473+	.0036050+	3.204907+	132.1247+
.0667968+	138.0000+	.9568151+	15.01513+	.0021159+
6.751544+	1.887495+	.9401631+	.0626143+	.0094200+
14.97877+	15.01513+	20.0	1.009	

970.0560+	2.500000-	.0300000+	.002122	2019.8
.0286892+	.2706759+	.0040710+	3.061780+	132.1247+
.0739121+	138.0000+	.9568151+	11.21181+	.0021151+
7.473337+	2.000555+	.7710546+	.0600251+	.0514665+
13.52957+	11.21181+	20.0	1.009	

G.E.M
FORCE

971.0560+	2.500000+	.0300000+	.002127	2019.8
1.131000+	.250483+	.0578464+	4.467237+	124.0117+
.1302971+	97.54472+	1.27133+	8.680168+	.0021144+
7.020634+	1.840920+	1.000622+	.1152768+	.0511462+
7.674767+	8.680168+	10.0	1.008	
972.0560+	.0000000+	.0300000+	.002127	2019.8
1.358623+	.3044879+	.1712261+	4.461994+	139.0786+
.1464332+	97.54472+	1.425793+	9.278186+	.0021166+
7.027969+	2.068902+	1.185087+	.1277294+	.1260291+
6.829047+	9.472411+	10.0	1.010	
973.0560+	2.500000+	.0300000+	.002127	2019.8
1.387076+	.3264707+	.2355173+	4.248796+	139.0786+
.1464332+	97.54472+	1.425793+	9.472411+	.0021166+
7.027960+	2.068902+	1.209905+	.1277294+	.1697940+
6.829047+	9.472411+	10.0	1.010	
980.0560+	2.500000+	.0300000+	.002152	2015.6
4.580909+	.0913463+	.1229550+	50.14876+	295.7710+
.7033206+	96.93975+	3.050565+	6.513251+	.0021758+
15.44337+	9.936961+	2.689390+	.4129114+	.0268407+
1.421826+	6.513251+	10.0	1.048	
981.0560+	.0000000+	.0300000+	.002147	2015.6
4.043682+	.2435903+	.2414663+	20.29506+	299.4443+
.6911134+	97.02849+	3.086149+	7.153214+	.0021726+
15.00667+	9.764491+	2.923330+	.4086736+	.0488434+
1.446940+	7.153214+	10.0	1.049	
982.0560+	2.500000+	.0300000+	.002145	2015.6
4.730286+	.4059839+	.3573234+	11.65141+	295.9892+
.6831390+	97.11714+	3.047755+	6.924338+	.0021719+
15.01384+	9.651824+	2.810395+	.4058720+	.0755395+
1.463630+	6.924338+	10.0	1.048	
983.0560+	2.500000+	.0300000+	.002135	2015.6
2.603435+	.3112543+	.1851843+	8.364335+	295.9892+
.3516539+	137.6020+	2.151053+	7.403402+	.0021711+
15.46243+	9.936782+	1.926111+	.2601656+	.0711315+
2.843704+	7.403402+	20.0	1.048	
984.0560+	.0000000+	.0300000+	.002133	2015.6
2.717247+	.2562773+	.1299247+	10.60275+	299.4443+
.3518096+	137.7270+	2.174187+	7.723628+	.0021719+
15.28552+	9.941182+	2.010081+	.2602508+	.0478148+
2.842446+	7.73628+	20.0	1.049	

G.E.M.
FORCE

985.0560+	2.500000-	.0300000+	.002128	2015.6
2.429162+	.1919965+	.0424628+	12.65211+	293.6858+
.3540817+	137.8519+	2.130443+	6.860456+	.0021689+
15.70752+	10.00538+	1.793955+	.2614921+	.0174804+
2.824206+	6.860456+	20.0	1.047	
986.0560+	2.500000-	.0300000+	.002112	2015.6
1.507701+	.2371801+	.0101516+	6.356779+	294.2174+
.1862536+	194.6559+	1.511473+	8.094884+	.0021610+
16.38236+	10.41639+	1.270977+	.1570099+	.0067331+
5.369023+	8.094884+	40.0	1.047	
987.0560+	.0000000+	.0300000+	.002106	2015.6
1.655057+	.2666673+	.0640000+	6.206449+	299.9863+
.1770786+	195.0057+	1.538346+	9.346451+	.0021633+
15.26005+	9.903277+	1.406072+	.1504391+	.0506331+
5.647206+	9.346451+	40.0	1.049	
988.0560+	2.500000+	.0300000+	.002101	2015.6
1.579582+	.2760690+	.1009026+	5.721692+	300.2570+
.1829074+	195.1804+	1.538356+	8.635968+	.0021586+
15.78200+	10.22925+	1.335339+	.1546252+	.0638792+
5.467447+	8.635968+	40.0	1.049	
989.0560+	2.500000+	.0500000+	.002144	2015.6
.4623580+	.3129459+	.0319120+	1.477439+	.0001150+
.0000000+	97.12225+	.0000011+	0000000+	.0021346+
.0000000+	.0000000+	.4623588+	.0000000+	.0690200+
0000000+	0000000+	10.0	1.000	
990.0560+	.0000000+	.0500000+	.002144	2015.6
.0995849+	.2621979+	.0561645-	.3798083+	.0001150+
.0000000+	97.12225+	.0000011+	0000000+	.0021346+
.0000000+	.0000000+	.0995849+	.0000000+	.5639863-
0000000+	0000000+	10.0	1.000	
991.0560+	2.500000-	.0500000+	.002144	2015.6
.0711321-	.2368239+	.1241478-	.3003586-	.0001149+
.0000000+	97.12225+	.0000011+	0000000+	.0021385+
.0000000+	.0000000+	.0711321-	.0000000+	1.745313+
0000000+	0000000+	10.0	1.000	
992.0560+	2.500000-	.0500000+	.002135	2015.6
.0960283-	.2224453+	.1384731-	.4316941-	.0011496+
.0000000+	137.8092+	.0000083+	0000000+	.0021385+
.0000000+	.0000000+	.0960283-	.0000000+	1.442002+
0000000+	0000000+	20.0	1.000	

G.E.M
FORCE

993.0560+	.0000000+	.0500000+	.002133	2015.6
.1066981+	.2452819+	.0735501-	.4350021+	.0001150+
.0000000+	137.7343+	.0000008+	0000000+	.0021346+
.0000000+	.0000000+	.1066981+	.0000000+	.6893291-
0000000+	0000000+	20.0	1.000	
994.0560+	2.500000+	.0500000+	.002128	2015.6
.5014815+	.3053337+	.0110017+	1.642404+	.0001151+
.0000000+	137.859 +	.0000008+	0000000+	.0021307+
.0000000+	.0000000+	.5014815+	.0000000+	.0219384+
0000000+	0000000+	20.0	1.000	
995.0560+	2.500000+	.0500000+	.002112	2015.6
.5696560+	.3017101+	.0048260-	1.888090+	.0000115+
.0000000+	194.6764+	.0000000+	0000000+	.0021230+
.0000000+	.0000000+	.5696560+	.0000000+	.0084719-
0000000+	0000000+	40.0	1.000	
996.0560+	.0000000+	.0500000+	.002099	2015.6
.1509498+	.2410262+	.0794728-	.6262797+	.0001152+
.0000000+	195.3755+	.0000005+	0000000+	.0021269+
.0000000+	.0000000+	.1509498+	.0000000+	.5264852-
0000000+	0000000+	40.0	1.000	
997.0560+	2.500000-	.0500000+	.002099	2015.6
.0916481-	.2405989+	.1239576-	.3809166-	.0001152+
.0000000+	195.3686+	.0000005+	0000000+	.0021269+
.0000000+	.0000000+	.0916481-	.0000000+	1.352538+
0000000+	0000000+	40.0	1.000	
998.0560+	2.500000-	.0500000+	.002094	2015.6
.5795396+	.2683767+	.0639287-	2.159425+	138.0798+
.0545936+	195.5498+	.7061107+	10.61552+	.0021398+
10.33310+	3.053194+	.5495383+	.0517674+	.1103094-
18.31716+	10.61552+	40.0	1.010	
999.0560+	.0000000+	.0500000+	.002083	2015.6
.7326609+	.2956070+	.0014857+	2.470495+	144.3543+
.0481706+	197.1013+	.7323864+	15.21600+	.0021259+
8.867009+	2.721213+	.6990034+	.0499306+	.0020276+
20.76814+	15.21600+	40.0	1.011	
1000.056+	2.500000+	.0500000+	.002078	2015.6
.8679617+	.3504202+	.0498299+	2.476859+	131.8881+
.0332901+	196.2457+	.6720979+	26.10402+	.0021190+
6.653569+	1.859540+	.8400306+	.0321801+	.0574103+
30.07508+	26.10402+	40.0	1.009	

G.E.M
FORCE

1001.056+	2.500000+	.0500000+	.002094	2015.6
1.059868+	.3586191+	.1162052+	2.955415+	144.7439+
.0066983+	138.9785+	1.041484+	12.22478+	.0021167+
7.995962+	2.449858+	.9753108+	.0797814+	.1096411+
11.53424+	12.22478+	20.0	1.011	

1002.056+	.0000000+	.0500000+	.002099	2015.6
.8037930+	.3180207+	.0326327+	2.527485+	122.7428+
.0693383+	138.8546+	.8839667+	11.54233+	.0021130+
7.554343+	1.959311+	.7516732+	.0648422+	.0405984+
14.42204+	11.59233+	20.0	1.008	

1003.056+	2.500000-	.0500000+	.002099	2015.6
.7860100+	.2757307+	.0653351+	2.850643+	132.1247+
.0877071+	138.8546+	.9515326+	8.961757+	.0021100+
8.889885+	2.478364+	.7226301+	.0806348+	.0831225+
11.40158+	8.961757+	20.0	1.009	

1004.056+	2.500000-	.0500000+	.002101	2015.6
1.109661+	.2621979+	.0029149-	4.232150+	139.0766+
.1938177+	98.09217+	1.417836+	5.725281+	.0021107+
9.328172+	2.738380+	.9295063+	.1623512+	.0026269-
5.159485+	5.725281+	10.0	1.010	

1005.056+	.0000000+	.0500000+	.002106	2015.6
1.244812+	.296467+	.0715783+	4.253633+	144.7439+
.1924862+	98.00440+	1.476912+	6.467019+	.0021152+
8.882458+	2.719567+	1.043879+	.1614158+	.0575013+
5.195176+	6.467019+	10.0	1.011	

1006.056+	2.500000+	.0500000+	.002106	2015.6
1.266151+	.3467779+	.1698658+	3.651188+	138.9541+
.1664608+	98.00440+	1.417836+	7.606305+	.0021152+
8.001553+	2.351864+	1.085464+	.1427858+	.1341591+
6.007419+	7.606305+	10.0	1.010	

1013.056+	2.500000-	.0500000+	.002252	2032.6
3.186719+	.0896547+	.0153926+	35.54432+	291.3958+
.8377895+	94.74464+	3.075591+	3.803722+	.0022548+
18.01533+	11.63682+	1.733995+	.4558680+	.0048302+
1.193617+	3.803722+	10.0	1.048	

1014.056+	.0000000+	.0500000+	.002245	2032.6
3.606398+	.2249827+	.1303405+	16.02966+	294.7973+
.8432171+	94.92459+	3.105594+	4.251740+	.0022571+
13.01062+	11.98415+	1.951285+	.4589380+	.0361414+
1.178943+	4.251740+	10.0	1.049	

G.E.M.
FORCE

1015.056+	2.500000+	.0500000+	.002245	2132.6
3.535266+	.3789183+	.2262632+	9.329890+	294.7913+
.8482171+	94.92459+	3.105594+	4.167879+	.0022563+
18.01678+	11.98415+	1.912798+	.4589380+	.0640017+
1.178943+	4.167879+	10.0	1.049	

1016.056+	2.500000+	.0500000+	.002231	2032.6
1.945463+	.3078711+	.1350125+	6.319083+	291.6680+
.4186449+	134.6385+	2.166304+	4.647049+	.0022498+
18.02757+	11.82976+	1.371353+	.2951019+	.0693986+
2.388658+	4.647049+	20.0	1.048	

1017.056+	.0000000+	.0500000+	.00226	2032.6
1.959690+	.2452819+	.0678921+	7.989539+	291.9399+
.4190353+	134.7652+	2.166285+	4.676670+	.0022464+
18.05503+	11.84079+	1.381001+	.2952959+	.0346443+
2.386433+	4.676670+	20.0	1.048	

1018.056+	2.500000-	.0500000+	.002224	2032.6
1.700057+	.1996087+	.0342165+	8.516949+	286.2602+
.4124559+	134.8918+	2.122145+	4.121792+	.0022441+
18.14277+	11.65488+	1.203618+	.2920133+	.0201266+
2.424501+	4.121792+	20.0	1.046	

1019.056+A	2.500000-	.0500000+	.002131	2012.7
1.187831+	.2589750+	.0026255+	4.586664+	302.6250+
.2319078+	194.1113+	1.559028+	5.121998+	.0021676+
19.77160+	12.96964+	.9642211+	.1882509+	.0022103+
4.312057+	5.121998+	40.0	1.050	

G.E.M
FORCE

1020.056+A	.0000000+	.0500000+	.002122	2012.7
1.295652+	.2918811+	.0542655+	4.438975+	303.1737+
.2239106+	194.4626+	1.559033+	5.786473+	.0021612+
19.11117+	12.52239+	1.058617+	.1829466+	.0418835+
4.466067+	5.786473+	40.0	1.050	
1021.056+A	2.500000+	.0500000+	.002109	2012.7
1.363939+	.3243598+	.0962934+	4.205020+	299.9863+
.2132273+	194.8133+	1.539865+	6.396644+	.0021573+
18.42599+	11.92492+	1.124224+	.1757522+	.0705994+
4.689828+	6.396644+	40.0	1.049	
1022.056+A	5.000000+	.1000000+	.002162	2012.7
.4054531+	.3518527+	.0906166+	1.152337+	.0000114+
.0000000+	96.74609+	.0000001+	0000000+	.0021630+
.0000000+	.0000000+	.4054531+	.0000000+	.2234948+
0000000+	0000000+	10.0	1.000	
1023.056+A	2.500000+	.1000000+	.002162	2012.7
.2133963+	.3027963+	.0188900+	.7047521+	.0001142+
.0000000+	96.74609+	.0000011+	0000000+	.0021630+
.0000000+	.0000000+	.2133963+	.0000000+	.0885207+
0000000+	0000000+	10.0	1.000	
1024.056+A	.0000000+	.1000000+	.002162	2012.7
.0213396+	.2638895+	.0563634+	.0808657+	.0001142+
.0000000+	96.74609+	.0000011+	0000000+	.0021630+
.0000000+	.0000000+	.0213396+	.0000000+	2.641257-
0000000+	0000000+	10.0	1.000	
1025.056+A	2.500000-	.1000000+	.002162	2012.7
.1849435-	.2638895+	.1205101-	.7008362-	.0001142+
.0000000+	96.74609+	.0000011+	0000000+	.0021630+
.0000000+	.0000000+	.1849435-	.0000000+	.6516049+
0000000+	0000000+	10.0	1.000	
1026.056+A	5.000000-	.1000000+	.002162	2012.7
.1707171-	.2486651+	.1544468-	.6865340-	.0001142+
.0000000+	96.74609+	.0000011+	0000000+	.0021630+
.0000000+	.0000000+	.1707171-	.0000000+	.9046945+
0000000+	0000000+	10.0	1.000	
1027.056+A	5.000000-	.1000000+	.002152	2012.7
.1600472-	.2325949+	.1603971-	.6880943-	.0001144+
.0000000+	137.0786+	.0000008+	0000000+	.0021551+
.0000000+	.0000000+	.1600472-	.0000000+	1.002185+
0000000+	0000000+	20.0	1.000	

G.E.M.
FORCE

1028.056+A .1493774- .0000000+ .0000000+ 0000000+	2.500000- .2368239+ 137.2043+ .0000000+ 0000000+	.1000000+ .1317892- .0000008+ .1493774- 20.0	.002148 .6307531- 0000000+ .0000000+ 1.000	2012.7 .0001145+ .0021511+ .8822568+
1029.056+A .0462358+ .0000000+ .0000000+ 0000000+	.0000000+ .2427445+ 137.2043+ .0000000+ 0000000+	.1000000+ .0734961- .0000008+ .0462358+ 20.0	.002148 .1904713+ 0000000+ .0000000+ 1.000	2012.7 .0001145+ .0021511+ 1.589592-
1030.056+A .2667454+ .0000000+ .0000000+ 0000000+	2.500000+ .2858803+ 137.3298+ .0000000+ 0000000+	.1000000+ .0000527- .0000008+ .2667454+ 20.0	.002143 .9330667+ 0000000+ .0000000+ 1.000	2012.7 .0001146+ .0021472+ .0001976-
1031.056+A .4303493+ .0000000+ .0000000+ 0000000+	5.000000+ .3442405+ 137.4553+ .0000000+ 0000000+	.1000000+ .0717016+ .0000008+ .4303493+ 20.0	.002141 1.250141+ 0000000+ .0000000+ 1.000	2012.7 .0001147+ .0021433+ .1666127+
1032.056+A .4564436+ .0000000+ .0000000+ 0000000+	5.000000+ .3376077+ 194.4626+ .0000000+ 0000000+	.1000000+ .0431183+ .0000005+ .4564436+ 40.0	.002118 1.351994+ 0000000+ .0000000+ 1.000	2012.7 .0001153+ .0021201+ .0944659+
1033.056+A .2749443+ .0000000+ .0000000+ 0000000+	2.500000+ .2782058+ 194.8133+ .0000000+ 0000000+	.1000000+ .0276199- .0000005+ .2749443+ 40.0	.002109 .9882768+ 0000000+ .0000000+ 1.000	2012.7 .0001155+ .0021124+ .1004565-

G.E.M.
FORCE

1034.056+	.0000000+	.1000000+	.002162	2037.5
.0952421+	.2418809+	.0631961-	.3237563+	.0001143+
.0000000+	192.4029+	.0000005+	0000000+	.0021856+
.0000000+	.0000000+	.0952421+	.0000000+	.6635314-
0000000+	0000000+	40.0	1.000	
1035.056+	2.500000-	.1000000+	.002162	2037.5
.1383707-	.2427356+	.0780442-	.5700468-	.0001143+
.0000000+	192.4029+	.0000005+	0000000+	.0021856+
.0000000+	.0000000+	.1383707-	.0000000+	.7085621+
0000000+	0000000+	40.0	1.000	
1036.056+	5.000000-	.1000000+	.002158	2037.5
.1743111-	.2465818+	.1408159-	.7062079-	.0000114+
.0000000+	192.5780+	.0000000+	0000000+	.0021856+
.0000000+	.0000000+	.1743111-	.0000000+	.8078426+
0000000+	0000000+	40.0	1.000	
1037.056+	5.000000-	.1000000+	.002151	2037.5
.4258942+	.2478638+	.0743962-	1.718258+	143.5719+
.0701.90+	192.9278+	.7441740+	6.070411+	.0021694+
12.59703+	3.913704+	.3979728+	.0555594+	.1746825-
14.25332+	6.070411+	40.0	1.011	
1038.056+	2.500000-	.1000000+	.002144	2037.5
.4456611+	.2700861+	.0749.08-	1.650071+	129.9800+
.0551864+	193.2770+	.6725074+	7.529791+	.0022008+
11.57110+	3.310051+	.4207533+	.0558791+	.1232345-
16.89576+	7.529791+	40.0	1.009	
1039.056+	.0000000+	.1000000+	.002144	2037.5
.6361458+	.2863255+	.0284474-	2.221757+	137.3260+
.0625311+	193.2770+	.7105137+	10.17322+	.0021861+
11.54852+	3.497122+	.5987078+	.0588513+	.0447184-
15.99196+	10.17322+	40.0	1.010	

G.E.M.
FORCE

1040.056+	2.500000+	.1000000+	.002139	2037.5
.7996748+	.3388897+	.0429444+	2.357620+	143.1771+
.0548605+	193.4514+	.7401294+	14.57649+	.0021836+
9.813046+	3.068123+	.7580858+	.0520074+	.0537035+
18.22803+	14.57649+	40.0	1.011	

1041.056+	5.000000+	.1000000+	.002135	2037.5
.9200753+	.4004803+	.1120445+	2.297727+	130.6988+
.0426031+	193.6256+	.6750080+	21.59643+	.0021796+
8.363490+	2.382615+	.8824709+	.0406622+	.1226448+
23.47245+	21.59643+	40.0	1.009	

1042.056+	5.000000+	.1000000+	.002152	2037.5
.8109062+	.4398159+	.2269383+	1.843739+	137.9545+
.0886963+	137.1081+	1.006172+	9.142501+	.0021605+
8.377807+	2.506316+	.7448415+	.0814702+	.2798579+
11.27442+	9.142501+	20.0	1.010	

1043.056+	2.500000+	.1000000+	.002159	2037.5
.5975098+	.3949885+	.2140428+	1.512727+	130.9375+
.0709455+	136.8595+	.9567295+	8.422091+	.0021709+
7.052315+	2.004727+	.5579274+	.0662457+	.358247+
14.89531+	8.422091+	20.0	1.009	

1044.056+	.0000000+	.1000000+	.002159	2037.5
.6757552+	.3290161+	.0913019+	2.053866+	137.8290+
.1045210+	136.8595+	1.007083+	6.465255+	.0021717+
9.866964+	2.953479+	.6118083+	.0946301+	.1351110+
9.567452+	6.465255+	20.0	1.010	

1045.056+	2.500000-	.1000000+	.002159	2037.5
.5334909+	.2867261+	.0412647+	1.860628+	130.4182+
.0992045+	136.8595+	.9558578+	5.377688+	.0021742+
9.855814+	2.803248+	.4853427+	.0902511+	.0773522+
10.08018+	5.377688+	20.0	1.009	

1046.056+	5.000000-	.1000000+	.002163	2037.5
.4979248+	.2368239+	.0243735-	2.102510+	121.6380+
.0962533+	136.7350+	.8895891+	5.173066+	.0021734+
10.28769+	2.719857+	.4542060+	.0878020+	.0489502-
10.98944+	5.173066+	20.0	1.008	

1047.056+	5.000000-	.1000000+	.002157	2038.2
.6615287+	.2334407+	.1202424-	2.853918+	137.5777+
.2110802+	95.95761+	1.433734+	3.134016+	.0021804+
9.941560+	2.982275+	.5462303+	.1742908+	.1817645-
4.737535+	3.134016+	10.0	1.010	

G.E.M.
FORCE

1053.056+	2.500000+	.1000000+	.002195	2038.2
.7042000+	.2041887+	.0678092-	2.477558+	130.6488+
.1858745+	96.04625+	1.360790+	3.708619+	.0021804+
9.215171+	2.626154+	.5930301+	.1567404+	.0954394-
5.379972+	3.788619+	10.0	1.009	
1054.056+	.0000000+	.1000000+	.002190	2038.2
.8749251+	.3264787+	.0255448-	2.679883+	137.5777+
.1956574+	96.13481+	1.431091+	4.471719+	.0021804+
9.215171+	2.764372+	.7317523+	.1636400+	.0291966-
5.110973+	4.471719+	10.0	1.010	
1055.056+	2.500000+	.1000000+	.002190	2038.2
.9673969+	.3721519+	.0343136+	2.599467+	137.4519+
.1957006+	96.13481+	1.429783+	4.941228+	.0021851+
9.209355+	2.766113+	.8090086+	.1637462+	.0354700+
5.107757+	4.941228+	10.0	1.010	
1056.056+	5.000000+	.1000000+	.002188	2038.2
1.059868+	.4161335+	.1020601+	2.546943+	130.6488+
.1775432+	96.22330+	1.358287+	5.969636+	.0021811+
8.799882+	2.508844+	.9888677+	.1507742+	.0962951+
5.632430+	5.969636+	10.0	1.009	
1057.056+	5.000000+	.1000000+	.002190	2038.2
1.778303+	.4279747+	.1618032+	4.155159+	294.3762+
.9511827+	96.13481+	3.062118+	1.869570+	.0022139+
20.62055+	13.43891+	.9113975+	.4874903+	.0909874+
1.051322+	1.869570+	10.0	1.048	
1058.056+	2.500000+	.1000000+	.002188	2038.2
1.906341+	.3569275+	.0612182+	5.340974+	294.3762+
.9447120+	96.22330+	3.059303+	2.017906+	.0022131+
20.48726+	13.34749+	.9802690+	.4857850+	.0321129+
1.058523+	2.017906+	10.0	1.048	
1059.056+	.0000000+	.1000000+	.002188	2038.2
1.934793+	.2537399+	.0389000-	7.625104+	294.3762+
.9447120+	96.22330+	3.059303+	2.048024+	.0022131+
20.48726+	13.34749+	.9940999+	.4857850+	.0137697-
1.058523+	2.048024+	10.0	1.048	
1060.056+	2.500000+	.1000000+	.002188	2038.2
1.700057+	.1826927+	.1409532-	9.305555+	294.3762+
.9511827+	96.22330+	3.059303+	1.787309+	.0022124+
20.63464+	13.43891+	.8712960+	.4874903+	.0829108-
1.051322+	1.787309+	10.0	1.048	

G.E.M.
FORCE

1061.056+	5.000000-	.1000000+	.002188	2038.2
1.508001+	.0947295+	.2721635-	15.91900+	297.8125+
1.014655+	96.22330+	3.095014+	1.486220+	.0021428+
22.46368+	14.33569+	.7485156+	.5036371+	.1804797-
.9855563+	1.486220+	10.0	1.049	
1067.056+	5.000000-	.1000000+	.002205	2024.8
.9709535+	.2266743+	.0997246-	4.283472+	295.8063+
.4746508+	135.4041+	2.184618+	2.045616+	.0021423+
21.16437+	13.41233+	.6584294+	.3218733+	.1027697-
2.106811+	2.045616+	20.0	1.047	
1068.056+	2.500000-	.1000000+	.002195	2024.8
1.049198+	.2901093+	.0594334-	3.616553+	299.2864+
.4802349+	135.7832+	2.204148+	2.184761+	.0021430+
21.15710+	13.57013+	.7088056+	.3244315+	.0566464-
2.082314+	2.184761+	20.0	1.048	
1069.056+	.0000000+	.1000000+	.002195	2024.8
1.209246+	.3281703+	.001801+	3.684812+	299.2864+
.4703670+	135.7832+	2.204148+	2.570856+	.0021423+
20.72949+	13.29129+	.8224110+	.3198977+	.0014928+
2.125995+	2.570856+	20.0	1.048	
1070.056+	2.500000+	.1000000+	.002191	2024.8
1.340840+	.383015+	.0599902+	3.507205+	295.8063+
.4583956+	135.9093+	2.176497+	2.925072+	.0021423+
20.43957+	12.95301+	.9193942+	.3143150+	.0447407+
2.181521+	2.925072+	20.0	1.047	
1071.056+	5.000000+	.1000000+	.002186	2024.8
1.180793+	.3949885+	.1722260+	2.989436+	296.0703+
.4653126+	136.0353+	2.176421+	2.537634+	.0021392+
20.75936+	13.14846+	.8058303+	.3175517+	.1509375+
2.149092+	2.537634+	20.0	1.047	
1072.056+	5.000000+	.1000000+	.002161	2024.8
1.128529+	.4487191+	.1051866+	2.515002+	296.0703+
.2186643+	192.4589+	1.538566+	5.161013+	.0021392+
19.30766+	12.22899+	.9260383+	.1794295+	.0932067+
4.573218+	5.161013+	40.0	1.047	
1073.056+	2.500000+	.1000000+	.002154	2024.8
1.063837+	.3974369+	.0468736+	2.676744+	296.0703+
.2252407+	192.8110+	1.535546+	4.723111+	.0021392+
19.88834+	12.59678+	.8682678+	.1838338+	.0440609+
4.439693+	4.723111+	40.0	1.047	

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1074.056+	.0000000+	.1000000+	.002150	2024.8
.9452336+	.3559838+	.0072764+	2.655271+	299.5535+
.2328809+	192.9889+	1.552195+	4.058870+	.0021385+
20.33081+	13.02406+	.766868+	.1888916+	.0076980+
4.294039+	4.058870+	40.0	1.048	

1075.056+	2.500000-	.1000000+	.002145	2024.8
.8302242+	.3183768+	.0435672-	2.607677+	302.1445+
.2449622+	193.1626+	1.564198+	3.389132+	.0021354+
21.23267+	13.69972+	.6668670+	.1967627+	.0524765-
4.082261+	3.389192+	40.0	1.049	

1076.056+	5.000000-	.1000000+	.002143	2024.8
.7026356+	.2841887+	.0839676-	2.472425+	296.3341+
.2435425+	193.6768+	1.530014+	2.885063+	.0021339+
21.53833+	13.62032+	.5650274+	.1958457+	.1195038-
4.106057+	2.885063+	40.0	1.047	

1077.056+	5.000000-	.1500000+	.002188	2021.2
.1707171-	.2351323+	.1395239-	.7260467-	.0001162+
.0000000+	96.18143+	.0000012+	8535855-	.0020987+
.0000001+	.0000000+	.1707171-	.0000000+	.8172817+
0000000+	8535855-	10.0	1.000	

1078.056+	2.500000-	.1500000+	.002188	2021.2
.0711321-	.2266743+	.1556625-	.3138075-	.0001162+
.0000000+	96.18143+	.0000012+	0000000+	.0020987+
.0000000+	.0000000+	.0711321-	.0000000+	2.18857+
0000000+	0000000+	10.0	1.000	

1079.056+	.0000000+	.1500000+	.002188	2021.2
.0711321+	.2841887+	.0802562-	.2502985+	.0001162+
.0000000+	96.18143+	.0000012+	0000000+	.0020987+
.0000000+	.0000000+	.0711321+	.0000000+	1.128269-
0000000+	0000000+	10.0	1.000	

1080.056+	2.500000+	.1500000+	.002188	2021.2
.2133963+	.3061725+	.0363079-	.6969647+	.0001162+
.0000000+	96.18143+	.0000012+	0000000+	.0020987+
.0000000+	.0000000+	.2133963+	.0000000+	.1701430-
0000000+	0000000+	10.0	1.000	

1081.056+	5.000000+	.1500000+	.002188	2021.2
.3712267+	.3450863+	.0168498+	1.133706+	.0001162+
.0000000+	96.18143+	.0000012+	0000000+	.0020987+
.0000000+	.0000000+	.3712267+	.0000000+	.0430693+
0000000+	0000000+	10.0	1.000	

G.E.M.
FORCE

1082.036+	5.000000+	.1500000+	.002182	2021.2
.3485474+	.322497+	.0263910+	1.01600+	.0001162+
.0000000+	136.1615+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.3485474+	.0000000+	.0757171+
0000000+	0000000+	20.0	1.000	
1083.036+	2.500000+	.1500000+	.002176	2021.2
.2203095+	.2672727+	.037517-	.825037+	.0001162+
.0000000+	136.4134+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.2203095+	.0000000+	.1757373-
0000000+	0000000+	20.0	1.000	
1084.036+	.0000000+	.1500000+	.002176	2021.2
.0675755+	.2309033+	.0270702-	.2925571+	.0001162+
.0000000+	136.4134+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.0675755+	.0000000+	1.303286-
0000000+	0000000+	20.0	1.000	
1085.036+	2.500000-	.1500000+	.002171	2021.2
.0052151-	.2232911+	.146317-	.3952007-	.0001162+
.0000000+	136.539 +	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.0089151-	.0000000+	1.60625+
0000000+	0000000+	20.0	1.000	
1086.036+	5.000000-	.1500000+	.002169	2021.2
.1742737-	.2241309+	.1561007-	.777531-	.0001162+
.0000000+	136.6648+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.1742737-	.0000000+	.8262500+
0000000+	0000000+	20.0	1.000	
1087.036+	5.000000-	.1500000+	.002141	2021.2
.1797022-	.2320516+	.1797022-	.7744073-	.0001162+
.0000000+	193.3518+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.1797022-	.0000000+	.9427092+
0000000+	0000000+	40.0	1.000	
1088.036+	2.500000-	.1500000+	.002134	2021.2
.0730639-	.2250416+	.1463000-	.3504184-	.0001162+
.0000000+	193.8784+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.0730639-	.0000000+	1.859010+
0000000+	0000000+	40.0	1.000	
1089.036+	.0000000+	.1500000+	.002132	2021.2
.0754749+	.2320516+	.1083717-	.3252500+	.0001162+
.0000000+	193.8784+	.0000000+	0000000+	.0020987+
.0000000+	.0000000+	.0754749+	.0000000+	1.435864-
0000000+	0000000+	40.0	1.000	

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FORCE

1090.056+	2.500000+	.1500000+	.002127	2021.2
.2138456+	.2628211+	.0651602-	.8136544+	.0001162+
.0000000+	194.0537+	.0000005+	0000000+	.0020987+
.0000000+	.0000000+	.2138456+	.0000000+	.3047071-
0000000+	0000000+	40.0	1.000	
1091.056+	5.000000+	.1500000+	.002123	2021.2
.3432312+	.3196589+	.0035424+	1.073741+	.0001162+
.0000000+	194.2287+	.0000005+	0000000+	.0020987+
.0000000+	.0000000+	.3432312+	.0000000+	.0103208+
0000000+	0000000+	40.0	1.000	
1097.056+	1.000000+	.1500000+	.002158	2021.2
1.0100+	.4110587+	.080600+	3.512836+	139.5753+
.1932827+	96.80397+	1.441834+	7.470826+	.0021008+
9.312845+	2.730822+	1.210092+	.1619756+	.2490321-
5.173766+	7.470826+	10.0	1.010	
1098.056+	2.500000+	.1500000+	.002152	2021.2
7786000+	.3789183+	.054380+	3.266400+	139.5965+
.1836188+	96.98110+	1.387241+	6.740595+	.0021001+
9.316096+	2.594281+	1.045690+	.155133+	.0441493+
5.446070+	6.740595+	10.0	1.009	
1099.056+	.0000000+	.1500000+	.002152	2021.2
.699000+	.3383199+	.0000000+	3.469142+	139.6992+
.0000000+	96.98110+	1.441834+	5.791190+	.0020964+
9.777777+	2.863400+	.9758982+	.1685142+	.0055823+
4.954245+	5.791190+	10.0	1.010	
1100.056+	2.500000-	.1500000+	.002147	2021.2
.576000+	.2757307+	.034188+	3.895448+	139.7142+
.1988888+	97.06955+	1.987777+	5.414673+	.0020956+
10.07884+	2.802662+	.8962986+	.1655314+	.0252166-
5.041148+	5.414673+	10.0	1.009	
1101.056+	5.000000-	.1500000+	.002147	2021.2
.482000+	.2486651+	.066900-	3.947570+	139.7142+
.1988888+	97.06955+	1.367208+	4.948509+	.0020956+
10.07884+	2.802662+	.8191338+	.1655314+	.0609479-
5.041148+	4.948509+	10.0	1.009	
1102.056+	5.000000-	.1500000+	.002165	2012.0
.3813275+	.2402071+	.1241484-	1.171187+	175.0587+
.0989601+	136.7248+	.9146749+	2.842835+	.0021078+
10.60795+	2.796345+	.2559943+	.0900489+	.4412949-
10.10507+	2.842835+	20.0	1.008	

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FORCE

1103.056+	2.500000-	.1500000+	.002158	2012.0
.3954946+	.2681185+	.0797219-	1.475073+	139.2029+
.1101526+	136.9768+	1.016251+	3.590423+	.0021010+
10.64223+	3.112613+	.3562524+	.0992229+	.2015753-
9.078311+	3.590423+	20.0	1.010	
1104.056+	.0000000+	.1500000+	.002152	2012.0
.5061050+	.3078711+	.0226681-	1.643885+	139.4513+
.1072839+	137.1026+	1.017130+	4.717436+	.0020943+
10.37993+	3.031551+	.4570689+	.096889+	.0447893-
9.321061+	4.717436+	20.0	1.010	
1105.056+	2.500000+	.1500000+	.002152	2012.0
.5665673+	.3307077+	.0100648-	1.713196+	132.5965+
.0976384+	137.1026+	.9671333+	5.802705+	.0020906+
9.952755+	2.758997+	.5161694+	.0889532+	.0177646-
10.24186+	5.802705+	20.0	1.009	
1106.056+	5.000000+	.1500000+	.002152	2012.0
.7166561+	.3958343+	.0671836+	1.810495+	139.8230+
.0998863+	137.1026+	1.019841+	7.174718+	.0020839+
9.686562+	2.822515+	.6515729+	.0908151+	.0937460+
10.01138+	7.174718+	20.0	1.010	
1107.056+	5.000000+	.1500000+	.002131	2012.0
.623087+	.3679496+	.0333703+	1.691287+	139.9467+
.0520677+	193.7831+	.7271820+	11.95189+	.0020795+
10.00578+	2.911935+	.5915101+	.0494909+	.0536234+
19.20573+	11.95189+	40.0	1.010	
1108.056+	2.500000+	.1500000+	.002124	2012.0
.495637+	.3132486+	.0309158-	1.572436+	140.0703+
.0575584+	194.135+	.7215090+	8.557623+	.0020744+
11.07846+	3.219007+	.4657555+	.0544258+	.0627651-
17.37363+	8.557623+	40.0	1.010	
1109.056+	.0000000+	.1500000+	.002118	2012.0
.3683895+	.3179495+	.002850-	1.158641+	133.0667+
.0568973+	194.4865+	.0041952+	6.474636+	.0020736+
11.53163+	3.182031+	.3485775+	.0538353+	.3853413-
17.57551+	6.474636+	40.0	1.009	
1110.056+	2.500000-	.1500000+	.002113	2012.0
.2965086+	.2572656+	.1023036-	1.152538+	140.1937+
.0646157+	194.6620+	.7201906+	4.588799+	.0020700+
12.45212+	3.613690+	.2785123+	.0606939+	.3450276-
15.47610+	4.588799+	40.0	1.010	

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1111.056+	5.000000-	.1500000+	.002109	2012.0
.1899452+	.2470091+	.1223300-	.7389804+	147.2034+
.0678465+	194.8373+	.755198+	2.799631+	.0020685+
12.46087+	3.794374+	.1778769+	.0635358+	.6440281-
14.73914+	2.799631+	40.0	1.011	
1112.056+	5.000000-	.1500000+	.002097	2012.0
.5031662+	.2901716+	.0681213-	1.734029+	302.9499+
.2557089+	195.3622+	1.550708+	1.967729+	.0021102+
22.36939+	14.30074+	.4007028+	.2036371+	.1353853-
3.910695+	1.967729+	40.0	1.049	
1113.056+	2.500000-	.1500000+	.002095	2012.0
.6271607+	.3290606+	.02 0264-	1.905912+	303.2179+
.2492000+	195.5369+	1.550694+	2.516696+	.0021065+
21.81927+	13.93672+	.5020498+	.1994876+	.0351208-
4.012840+	2.516696+	40.0	1.049	
1114.056+	.0000000+	.1500000+	.002095	2012.0
.7403731+	.3666676+	.0177269+	2.019194+	300.8854+
.2405997+	195.5369+	1.538765+	3.077197+	.0021050+
21.24426+	13.45574+	.5967864+	.1939382+	.023943+
4.156279+	3.077197+	40.0	1.048	
1115.056+	2.500000+	.1500000+	.002088	2012.0
.8589766+	.4205139+	.0526489+	2.042682+	302.9499+
.2405683+	195.8857+	1.546564+	3.570614+	.0021109+
21.03760+	13.45398+	.6924057+	.1939178+	.0612925+
4.156823+	3.570614+	40.0	1.049	
1116.056+	5.000000+	.1500000+	.002088	2012.0
.9757830+	.4760696+	.0928540+	2.049664+	302.9499+
.2373037+	195.8857+	1.546564+	4.113691+	.0021117+
20.73619+	13.7658+	.7887003+	.1917256+	.0951584+
4.15785+	4.113691+	40.0	1.049	
1117.056+	5.000000+	.1500000+	.002109	2012.0
1.237699+	.5523073+	.1528107+	2.240960+	300.6195+
.4658541+	138.4793+	2.170861+	2.656836+	.0021109+
20.74337+	13.16377+	.8443533+	.3178040+	.1234635+
2.146593+	2.656836+	20.0	1.048	
1118.056+	2.500000+	.1500000+	.002109	2012.0
1.091878+	.4871807+	.0865710+	2.241117+	297.1239+
.4637030+	138.4793+	2.145618+	2.35469+	.0021102+
20.89772+	13.10298+	.7459697+	.3168013+	.0792863+
2.156552+	2.35469+	20.0	1.047	

G.E.M.
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1119.056+	.0000000+	.1500000+	.002109	2012.0
.9780667+	.4220541+	.0492408+	2.317396+	297.1239+
.4669685+	138.4793+	2.145618+	2.094502+	.0021102+
21.04488+	13.19525+	.666764+	.3183221+	.0503451+
2.141471+	2.094502+	20.0	1.047	

1120.056+	2.500000-	.1500000+	.002109	2012.0
.832458+	.3535443+	.0012225-	2.354006+	300.6195+
.4790701+	138.4793+	2.170861+	1.737210+	.0021095+
21.34661+	13.53721+	.5626818+	.3238995+	.0014689-
2.087376+	1.737210+	20.0	1.048	

1121.056+	5.000000-	.1500000+	.002109	2012.0
.6508589+	.2901093+	.0407956-	2.243495+	297.1239+
.4767650+	138.4793+	2.145618+	1.365156+	.0021095+
21.49382+	13.47208+	.4407329+	.3228442+	.0626796-
2.097469+	1.365156+	20.0	1.047	

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1127.056+	5.000000-	.1500000+	.002123	2009.2
.8891515+	.2334407+	.1521678-	3.808895+	303.7531+
.9681278+	97.62522+	3.111421+	.9184237+	.0020976+
21.46738+	13.67832+	.4517753+	.4919029+	.1711382-
1.032921+	.9184237+	10.0	1.049	

1128.056+	2.500000-	.1500000+	.002116	2009.2
1.045642+	.2909551+	.0809469-	3.593826+	303.7531+
.9681278+	96.12463+	3.159992+	1.080066+	.0020969+
21.47482+	13.67832+	.5312877+	.4919029+	.0774135-
1.032921+	1.080066+	10.0	1.049	

1129.056+	.0000000+	.1500000+	.002107	2009.2
1.180793+	.3417031+	.0222675-	3.455611+	303.7531+
.9681278+	97.97829+	3.100208+	1.219666+	.0020969+
21.47482+	13.67832+	.5999576+	.4919029+	.0188581-
1.032921+	1.219666+	10.0	1.049	

1130.056+	2.500000+	.1500000+	.002107	2009.2
1.273265+	.3789183+	.0901720+	3.360262+	303.7531+
.9681278+	97.97829+	3.100208+	1.315182+	.0020969+
21.47482+	13.67832+	.6469422+	.4919029+	.0708195+
1.032921+	1.315182+	10.0	1.049	

1131.056+	5.000000+	.1500000+	.002107	2009.2
1.273265+	.4178251+	.1978377+	3.047363+	304.0204+
.9689796+	97.97829+	3.102936+	1.314026+	.0020932+
21.51263+	13.69036+	.6466623+	.4921227+	.1553783+
1.032013+	1.314026+	10.0	1.049	

1132.056+	2.500000+	.2500000+	.002134	2009.2
.1636038+	.2605063+	.0342594-	.6280226+	.0000114+
.0000000+	97.35957+	.0000001+	.0000000+	.0021356+
.0000000+	.0000000+	.1636038+	.0000000+	.2094050-
0000000+	0000000+	10.0	1.000	

1133.056+	.0000000+	.2500000+	.002134	2009.2
.0569057+	.2452819+	.0435705-	.2320011+	.00001148+
.0000000+	97.35957+	.0000011+	.0000000+	.0021356+
.0000000+	.0000000+	.0569057+	.0000000+	.7656616-
0000000+	0000000+	10.0	1.000	

1134.056+	2.500000-	.2500000+	.002134	2009.2
.0071113+	.2148331+	.1256556-	.0331104+	.00001148+
.0000000+	97.35957+	.0000011+	.0000000+	.0021356+
.0000000+	.0000000+	.0071132+	.0000000+	17.66510-
0000000+	0000000+	10.0	1.000	

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1135.056+	2.500000-	.2500000+	.002122	2009.2
.0071132-	.2013003+	.1284483-	.0353363-	.0001151+
.0000000+	138.0774+	.0000008+	0000000+	.0021240+
.0000000+	.0000000+	.0071132-	.0000000+	18.05770+
0000000+	0000000+	20.0	1.000	
1136.056+	.0000000+	.2500000+	.002127	2009.2
.1138114+	.2283659+	.0843654-	.4983728+	.0001151+
.0000000+	138.0774+	.0000008+	0000000+	.0021240+
.0000000+	.0000000+	.1138114+	.0000000+	.7412744-
0000000+	0000000+	20.0	1.000	
1137.056+	2.500000+	.2500000+	.002119	2009.2
.1778303+	.2545857+	.0480680-	.6985084+	.0001152+
.0000000+	138.2025+	.0000008+	0000000+	.0021202+
.0000000+	.0000000+	.1778303+	.0000000+	.2703031-
0000000+	0000000+	20.0	1.000	
1138.056+	2.500000+	.2500000+	.002080	2009.2
.1904843+	.2491459+	.0735316-	.7645492+	.0001163+
.0000000+	196.2083+	.0000005+	0000000+	.0020825+
.0000000+	.0000000+	.1904843+	.0000000+	.3807748-
0000000+	0000000+	40.0	1.000	
1139.056+	.0000000+	.2500000+	.002064	2009.2
.1257915+	.2273510+	.1001477-	.5532922+	.0001167+
.0000000+	196.9041+	.0000005+	0000000+	.0020678+
.0000000+	.0000000+	.1257915+	.0000000+	.7961402-
0000000+	0000000+	40.0	1.000	
1140.056+	2.500000-	.2500000+	.002064	2009.2
.0053910+	.2158125+	.1365166-	.0249803+	.0001167+
.0000000+	196.9041+	.0000005+	0000000+	.0020678+
.0000000+	.0000000+	.0053910+	.0000000+	25.32275-
0000000+	0000000+	40.0	1.000	
1144.056+	2.500000-	.2500000+	.002094	2007.1
.4908116+	.2672727+	.0438117-	1.836369+	140.5635+
.2131893+	98.29419+	1.430028+	2.302233+	.0020562+
10.42107+	3.012075+	.4045631+	.1757763+	.0020638-
4.690665+	2.302233+	10.0	1.010	
1145.056+	.0000000+	.2500000+	.002090	2007.1
.5477173+	.3180207+	.0037243-	1.722269+	140.6865+
.2133759+	98.20623+	1.432562+	2.566912+	.0020526+
10.43932+	3.014711+	.4513995+	.1758531+	.0067996-
4.686563+	2.566912+	10.0	1.010	

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1146.056+	2.500000+	.2500000+	.002094	2007.1
.5975090+	.3739133+	.0765407+	1.576882+	133.7689+
.1911228+	98.29419+	1.360904+	3.126312+	.0020490+
9.851341+	2.700305+	.5016357+	.1604560+	.1260996+
5.232235+	3.126312+	10.0	1.009	

1147.056+	2.500000+	.2500000+	.002090	2007.1
.4659154+	.3433947+	.0476614+	1.356792+	133.8856+
.0985677+	139.1406+	.9622328+	4.725697+	.0020448+
10.17575+	2.785819+	.4241039+	.0897404+	.1022962+
10.14325+	4.755897+	20.0	1.009	

1148.056+	.0000000+	.2500000+	.002090	2007.1
.3983339+	.3053337+	.0249203+	1.304604+	133.8856+
.0971162+	139.2066+	.9617749+	4.101681+	.0020440+
10.02740+	2.744240+	.3630790+	.0885195+	.0625605+
10.29693+	4.101681+	20.0	1.009	

1149.056+	2.500000-	.2500000+	.002086	2007.1
.3663304+	.2664269+	.0437619-	1.374975+	133.8856+
.1044735+	139.3310+	.9609173+	3.506442+	.0020440+
10.78705+	2.952137+	.3316787+	.0945912+	.1194601-
9.571801+	3.506442+	20.0	1.009	

1150.056+	2.500000-	.2500000+	.002061	2007.1
.2731473+	.2461544+	.0840082-	1.109658+	133.8856+
.0587344+	197.1715+	.6790315+	4.650550+	.0020426+
12.01095+	3.284772+	.2579942+	.0554760+	.3075565-
17.02579+	4.650550+	40.0	1.009	

1151.056+	.0000000+	.2500000+	.002054	2007.1
.3432312+	.2713682+	.0412766-	1.264817+	133.8856+
.0579909+	197.5183+	.6778392+	5.918703+	.0020433+
11.05474+	3.243193+	.3244179+	.0548123+	.1202589-
17.24407+	5.918703+	40.0	1.009	

1152.056+	2.500000+	.2500000+	.002050	2007.1
.4169091+	.0884617+	.1290494-	4.712873+	140.9322+
.0610431+	197.6915+	.7128899+	6.829750+	.0020440+
11.85057+	3.413887+	.399238+	.0575312+	.3095384-
16.38186+	6.829750+	40.0	1.010	

1153.056+	2.500000+	.2500000+	.002036	2007.1
.6343488+	.4196597+	.0668382+	1.511580+	3.8.0683+
.2514756+	198.3827+	1.552899+	2.522505+	.0020830+
21.91639+	14.06399+	.5068806+	.2009433+	.1053650+
3.976528+	2.522505+	40.0	1.050	

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1154.056+	.000000+	.250000+	.002036	2007.1
.560000+	.367049+	.024030+	.4356773-	304.5542+
.250000+	198.3827+	1.53518+	.6309774-	.0020815+
22.0000+	13.99814+	.1279174-	.2001908+	.0097469-
3.995232+	.6389774-	40.0	1.049	

1155.056+	2.500000-	.2500000+	.002032	2007.1
.4816019+	.3260692+	.0067496-	1.476992+	302.2115+
.2483729+	198.5551+	1.522073+	1.939027+	.0020800+
22.00007+	13.19046+	.3857837+	.1989573+	.0140154-
4.026203+	1.939027+	40.0	1.048	

1156.056+	2.500000-	.2500000+	.002043	2007.1
.4852446+	.3417031+	.2985031+	1.332283+	304.8202+
.4087129+	140.5005+	2.169735+	1.113851+	.0020793+
18.22097+	11.54911+	.3231642+	.2901321+	.6556965+
2.446705+	1.113851+	20.0	1.049	

1157.056+	.000000+	.250000+	.002054	2007.1
.688000+	.432080+	.069780+	1.087257+	302.2115+
.4018728+	140.3774+	2.152849+	1.333295+	.0020822+
18.04628+	11.35639+	.3830874+	.2866787+	.7244752+
2.488225+	1.336295+	20.0	1.048	

1158.056+	2.500000+	.2500000+	.002054	2007.1
.6366325+	.5607653+	.4161349+	1.135292+	302.2115+
.4018926+	140.3774+	2.152849+	1.558085+	.0020830+
18.04000+	11.35639+	.4541235+	.2866787+	.6536500+
2.488225+	1.584085+	20.0	1.048	

1159.056+	2.500000+	.2500000+	.002062	2007.1
.6970942+	.7307711+	.8024775+	.9539167+	301.9468+
.7698075+	99.08230+	3.047434+	.8826135+	.0020836+
17.71077+	11.15890+	.3894803+	.4412807+	1.151174+
1.266131+	.8826135+	10.0	1.048	

1160.056+	.000000+	.250000+	.002067	2007.1
.864000+	.528000+	.149000+	1.037602+	301.9468+
.7698075+	98.90771+	3.047434+	.9555948+	.0020866+
17.71077+	11.15890+	.3775574+	.4412807+	1.145873+
1.266131+	.8555948+	10.0	1.048	

1161.056+	2.500000-	.2500000+	.002071	2007.1
.5334909+	.5460783+	.6972733+	.9733844+	301.9468+
.7698075+	98.62030+	3.055513+	.6754695+	.0020866+
17.71077+	11.15890+	.2960716+	.4412807+	1.307001+
1.266131+	.6754695+	10.0	1.048	

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1165.056+	2.500000-	.3000000+	.002181	2012.0
30.73577-	.2097583+	.5242290-	147.0061-	.0001153+
.000111 +	96.31656+	.0000011+	2757.7.1-	.0021193+
6460.655+	.001.773+	30.83232-	.0001118+	.0170006+
8943.095+	2757.7.1-	10.0	1.000	

1166.056+	.0000000+	.3000000+	.002176	2012.0
.1066921+	.2463659+	.0778925-	.4672245+	.0001153+
.0000000+	96.40603+	.0000011+	.0000000+	.0021193+
.0000000+	.0000000+	.1066921+	.0000000+	.7300272-
0000000+	0000000+	10.0	1.000	

1167.056+	2.500000+	.3000000+	.002172	2012.0
.1791699+	.2466651+	.0092170-	.8009563+	.0001153+
.0000000+	96.47584+	.0000011+	0000000+	.0021193+
.0000000+	.0000000+	.1791699+	.0000000+	.0462774-
0000000+	0000000+	10.0	1.000	

1168.056+	2.500000+	.3000000+	.002165	2012.0
.2027.65+	.2461.77+	.0433221-	.8236638+	.0001153+
.0000000+	13.7176+	.0000000+	0000000+	.0021193+
.0000000+	.0000000+	.2027265+	.0000000+	.2137.72-
0000000+	0000000+	20.0	1.000	

1169.056+	.0000000+	.3000000+	.002158	2012.0
.1244811+	.2215995+	.0833287-	.5617394+	.0001153+
.0000000+	13.5986+	.0000000+	0000000+	.0021193+
.0000000+	.0000000+	.1244812+	.0000000+	.6594013-
0000000+	0000000+	20.0	1.000	

1170.056+	2.500000-	.3000000+	.002152	2012.0
.0071137-	.20.1461+	.1126815-	.0351884-	.0001153+
.0000000+	137.1026+	.0000000+	0000000+	.0021193+
.0000000+	.0000000+	.0071132-	.0000000+	15.84116+
0000000+	0000000+	20.0	1.000	

1171.056+	2.500000-	.3000000+	.002136	2012.0
.0035940+	.205.477+	.1311347-	.0172336+	.0001153+
.0000000+	193.6171+	.0000005+	0000000+	.0021193+
.0000000+	.0000000+	.0035940+	.0000000+	36.57016-
0000000+	0000000+	40.0	1.000	

1172.056+	.0000000+	.3000000+	.002131	2014.2
.1311226+	.21.37.6+	.1113409-	.6007172+	.0001150+
.0000000+	193.867 +	.0000005+	0000000+	.0021309+
.0000000+	.0000000+	.1311226+	.0000000+	.8487475-
0000000+	0000000+	40.0	1.000	

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1173.056+	2.500000+	.3000000+	.002120	2014.2
.1958754+	.2452997+	.0777608-	.7985144+	.0001153+
.0000000+	134.3943+	.0000005+	0000000+	.0021193+
.0000000+	.0000000+	.1958754+	.0000000+	.3969911-
0000000+	0000000+	40.0	1.000	
1174.056+	2.500000+	.3000000+	.002098	2014.2
.4061270+	.2965819+	.0506523-	1.369358+	145.3780+
.0660364+	135.4235+	.7439124+	.150045+	.0021253+
11.95283+	3.693143+	.3809691+	.0619457+	.1247204-
15.14315+	.150045+	40.0	1.011	
1175.056+	.0000000+	.3000000+	.002098	2014.2
.3378401+	.2615391+	.0785093-	1.291738+	138.8296+
.0615200+	135.4235+	.7104037+	.491547+	.0021131+
11.72784+	3.440560+	.3182607+	.0579546+	.2323860-
16.25486+	5.491547+	40.0	1.010	
1176.056+	2.500000-	.3000000+	.002087	2014.2
.2713503+	.2457271+	.1108109-	1.104275+	132.4787+
.0610598+	135.9463+	.6760973+	1.444004+	.0020936+
12.31195+	3.414825+	.2557351+	.0575461+	.4083687-
16.37736+	4.444004+	40.0	1.010	
1177.056+	2.500000-	.3000000+	.002100	2014.2
.3805568+	.2655811+	.0702844-	1.432921+	139.5753+
.1142822+	138.7719+	1.005789+	3.32997+	.0020920+
11.05911+	3.229305+	.3415264+	.1025613+	.1846882-
8.750262+	3.329972+	20.0	1.010	
1178.056+	.0000000+	.3000000+	.002109	2014.2
.4161229+	.3044870+	.0256444-	1.366631+	132.5965+
.1050706+	138.5235+	.9572135+	.960410+	.0020920+
10.70284+	3.969010+	.3765577+	.0950804+	.0616271-
9.517404+	3.960410+	20.0	1.009	
1179.056+	2.500000+	.3000000+	.002109	2014.2
.4659154+	.3425489+	.0121837+	1.360142+	139.6992+
.1106988+	138.5235+	1.008487+	1.208853+	.0020883+
10.7218+	3.178048+	.4194795+	.0996659+	.0261502+
9.033514+	4.208853+	20.0	1.010	
1180.056+	2.500000+	.3000000+	.002112	2014.2
.5334900+	.3873763+	.1019266+	1.377190+	132.8318+
.1962074+	17.85780+	1.357397+	.719014+	.0020854+
10.00740+	3.772143+	.4459853+	.1640246+	.1910559+
5.096646+	4.719014+	10.0	1.009	

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1181.056+	.0000000+	.3000000+	.002112	2014.2
.5132615+	.3315535+	.0122859+	1.365155+	132.8318+
.1962074+	97.55780+	1.357397+	2.46507+	.0020846+
10.01090+	2.772143+	.4340923+	.1640246+	.0814343+
5.096646+	2.646507+	10.0	1.009	

1182.056+	2.000000-	.3000000+	.002112	2014.2
.4694720+	.2024971+	.0031681+	1.361864+	132.8318+
.1962074+	97.85780+	1.357397+	2.392732+	.0020846+
10.01090+	2.772143+	.3924670+	.1640246+	.0067483+
5.096646+	2.392732+	10.0	1.009	

1189.056+	2.000000-	.3000000+	.002144	2014.2
.9033780+	.5396203+	.0234268+	1.74099+	297.2864+
.9604698+	97.15123+	3.010623+	.9405584+	.0021320+
21.26679+	13.57013+	.4607966+	.4899182+	.0259324+
1.041157+	.9405584+	10.0	1.048	

1190.056+	.0000000+	.3000000+	.002140	2014.2
.7682269+	.4054891+	.023564-	1.32377+	297.2864+
.9604698+	97.23984+	3.077816+	.7298449+	.0021313+
21.27415+	13.57013+	.3918585+	.4899182+	.0310539-
1.041157+	.7998449+	10.0	1.048	

1191.056+	2.000000-	.3000000+	.002135	2014.2
.6899216+	.3075259+	.0965662-	1.735689+	297.2864+
.9604698+	97.32836+	3.075017+	.7133792+	.0021313+
21.27415+	13.57013+	.3919470+	.4899182+	.1399548-
1.041157+	.7183792+	10.0	1.048	

1192.056+	2.000000-	.3000000+	.002125	2014.2
.5228211+	.3033947+	.0166840-	1.32507+	297.5535+
.4872479+	130.0252+	2.170280+	1.073008+	.0021275+
21.60408+	13.76829+	.3915359+	.3276171+	.1084195-
2.052343+	1.073008+	20.0	1.048	

1193.056+	.0000000+	.3000000+	.002120	2014.2
.6010664+	.4068297+	.0250931-	1.477439+	297.5535+
.4372479+	130.1499+	2.168321+	1.233594+	.0021275+
21.60408+	13.76829+	.4041467+	.3276171+	.0417477-
2.052343+	1.233594+	20.0	1.048	

1194.056+	2.000000-	.3000000+	.002116	2014.2
.675755+	.4712563+	.0248419+	1.31817+	301.8756+
.4910250+	130.2746+	2.183160+	1.376213+	.0021275+
21.60408+	13.87502+	.432151+	.3293204+	.0367617+
2.036555+	1.376213+	20.0	1.049	

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1195.056+	2.500000+	.3000000+	.002098	2014.2
.5786411+	.4004283+	.001937+	1.445055+	305.3588+
.2526552+	195.4235+	1.562548+	2.290240+	.0021267+
21.75758+	14.12995+	.4619316+	.2016957+	.0033479+
3.257963+	2.290240+	40.0	1.050	
1196.056+	.0000000+	.3000000+	.002098	2014.2
.5175423+	.3542744+	.0315507-	1.460851+	299.5535+
.2478518+	195.4235+	1.532842+	2.088111+	.0021260+
21.76511+	13.86132+	.4147466+	.1236228+	.0003625-
4.034667+	2.088111+	40.0	1.048	
1197.056+	2.500000-	.3000000+	.002093	2014.2
.4438644+	.3158127+	.0678838-	1.405467+	296.0703+
.2466139+	195.5979+	1.513667+	1.799835+	.0021252+
21.91877+	13.79209+	.3560560+	.1278270+	.1129332-
4.054920+	1.799835+	40.0	1.047	
1198.056+	2.500000+	.3000000+	.002147	2016.3
.1564906+	.2588147+	.0177083-	.6046435+	.0001165+
.0000000+	97.01657+	.0000012+	.0000000+	.0020824+
.0000000+	.0000000+	.1564906+	.0000000+	.1131522-
0000000+	0000000+	10.0	1.000	
1199.056+	.0000000+	.3000000+	.002147	2016.3
.0924717+	.2368239+	.0737760-	.3904662+	.0001165+
.0000000+	97.01657+	.0000012+	.0000000+	.0020824+
.0000000+	.0000000+	.0924717+	.0000000+	.7572216-
0000000+	0000000+	10.0	1.000	
1200.056+	2.500000-	.3000000+	.002147	2016.3
.0142264-	.2131415+	.1180597-	.0667463-	.0001165+
.0000000+	97.01657+	.0000012+	.0000000+	.0020824+
.0000000+	.0000000+	.0142264-	.0000000+	8.298620+
0000000+	0000000+	10.0	1.000	
1201.056+	2.500000-	.3000000+	.002140	2016.3
.0071132+	.1945339+	.1273624-	.0365653+	.0001165+
.0000000+	137.4599+	.0000008+	.0000000+	.0020824+
.0000000+	.0000000+	.0071132+	.0000000+	17.30504-
0000000+	0000000+	20.0	1.000	
1202.056+	.0000000+	.3000000+	.002134	2016.3
.1244812+	.2224453+	.0960327-	.5596035+	.0001165+
.0000000+	137.7101+	.0000008+	.0000000+	.0020824+
.0000000+	.0000000+	.1244812+	.0000000+	.7714634-
0000000+	0000000+	20.0	1.000	

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1203.056+	2.500000+	.3500000+	.002129	2016.3
.1707171+	.2503567+	.0591065-	.6818952+	.0001165+
.0000000+	137.8350+	.0000000+	0000000+	.0020824+
.0000000+	.0000000+	.1707171+	.0000000+	.3462248-
0000000+	0000000+	20.0	1.000	
1204.056+	2.500000+	.3500000+	.002112	2016.3
.1904843+	.2448724+	.0758418-	.7778921+	.0011651+
.0000000+	194.6423+	.0000005+	0000000+	.0020824+
.0000000+	.0000000+	.1904843+	.0000000+	.3981525-
0000000+	0000000+	40.0	1.000	
1205.056+	.0000000+	.3500000+	.002099	2016.3
.1365736+	.2196586+	.1061797-	.6217540+	.0001165+
.0000000+	195.3412+	.0000005+	0000000+	.0020824+
.0000000+	.0000000+	.1365736+	.0000000+	.7774538-
0000000+	0000000+	40.0	1.000	
1206.056+	2.500000-	.3500000+	.002099	2016.3
.0089851+	.2064107+	.1391022-	.0435302+	.0001165+
.0000000+	195.3412+	.0000005+	0000000+	.0020824+
.0000000+	.0000000+	.0089851+	.0000000+	15.48141-
0000000+	0000000+	40.0	1.000	
1210.056+	2.500000-	.3500000+	.002123	2016.3
.4410191+	.2486651+	.0584684-	1.773546+	132.4787+
.1965594+	97.63022+	1.356944+	2.243673+	.0020980+
9.991702+	2.777117+	.3085727+	.1342705+	.1325757-
5.087518+	2.243693+	10.0	1.009	
1211.056+	.0000000+	.3500000+	.002123	2016.3
.5192645+	.3077963+	.0426254-	1.714896+	132.5965+
.1967342+	97.63022+	1.358150+	2.539420+	.0020942+
10.00948+	2.779586+	.4339012+	.143926+	.0020881-
5.082998+	2.639420+	10.0	1.009	
1212.056+	2.500000+	.3500000+	.002123	2016.3
.5477173+	.3518527+	.0093407+	1.556666+	132.5965+
.1964428+	97.63022+	1.358150+	2.788177+	.0020942+
9.994652+	2.775462+	.4577881+	.141890+	.0170538+
5.090540+	2.788177+	10.0	1.009	
1213.056+	2.500000+	.3500000+	.002113	2016.3
.4445757+	.3349367+	.0232971+	1.327342+	132.7142+
.1009340+	138.3262+	.9594294+	4.404616+	.0020905+
10.27979+	2.852120+	.4038169+	.0916803+	.0524030+
9.907459+	4.404616+	20.0	1.009	

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1214.056+	.0000000+	.3500000+	.002111	2016.3
.3947833+	.2951141+	.0110131-	1.337413+	132.7142+
.1009340+	138.4506+	.9585677+	3.211299+	.0020005+
10.57977+	2.252120+	.3585894+	.0916803+	.0272221-
9.90749+	3.111299+	20.0	1.009	
1215.056+	2.500000-	.3500000+	.002106	2016.3
.3336506+	.2562773+	.073012-	1.327795+	132.7142+
.1051243+	138.45717+	.9577034+	3.343414+	.0020008+
10.51237+	3.000437+	.3215000+	.0259920+	.1623010-
9.417530+	3.349444+	20.0	1.009	
1216.056+	2.500000-	.3500000+	.002095	2016.3
.2503354+	.2512509+	.1022449-	1.158981+	132.7142+
.0601103+	195.49119+	.6788629+	4.655933+	.0020033+
12.14242+	3.367316+	.2544119+	.0567909+	.3261264-
12.60543+	4.655933+	40.0	1.009	
1217.056+	.0000000+	.3500000+	.002088	2016.3
.3342411+	.2561109+	.0730121-	1.303556+	132.7142+
.0602240+	195.49131+	.6775500+	5.541518+	.0020031+
12.16000+	3.371437+	.3152420+	.0563525+	.2462510-
12.52813+	4.644511+	40.0	1.009	
1218.056+	2.500000+	.3500000+	.002084	2016.3
.3647935+	.2854708+	.0492015-	1.277273+	132.7142+
.0571130+	195.0115+	.6770510+	6.387001+	.0020031+
11.57084+	3.194210+	.3450051+	.0540222+	.1342713-
17.50250+	6.327021+	40.0	1.009	
1219.056+	2.500000+	.3500000+	.002075	2016.3
.5498507+	.3361248+	.0072994-	1.388055+	301.8756+
.2529582+	196.3642+	1.537325+	2.173832+	.0021297+
22.00451+	14.11690+	.4388723+	.018810+	.0132713-
3.253311+	2.173831+	40.0	1.049	
1220.056+	.0000000+	.3500000+	.002073	2016.3
.4833936+	.3487128+	.0282433-	1.326214+	301.8756+
.2539640+	196.5376+	1.533915+	1.703415+	.0021289+
22.02971+	14.20315+	.3451916+	.0225282+	.0524266-
3.237311+	1.203415+	40.0	1.049	
1221.056+	2.500000-	.3500000+	.002070	2016.3
.4330883+	.3091025+	.0791137-	1.392737+	222.5535+
.2550104+	196.7108+	1.532011+	1.712500+	.0021282+
22.10731+	14.09330+	.3459015+	.0122446+	.1596027-
3.265080+	1.713509+	40.0	1.048	

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1225.056+	2.500000-	.3500000+	.002207	2022.6
.5761702+	.3552359+	.0586082-	1.621936+	298.3574+
.2706049+	95.70080+	3.117606+	.523-196+	.0021577+
1.00900+	13.7133+	.2923824+	.4925416+	.1017203-
1.030285+	.5936196+	10.0	1.049	

1226.056+	.0000000+	.3500000+	.002203	2022.6
.6401891+	.4804143+	.0019449-	1.332577+	298.9014+
.9802586+	95.70036+	3.120370+	.6530818+	.0021305+
1.24934+	13.84971+	.323256+	.4950154+	.0030380-
1.020138+	.6530818+	10.0	1.049	

1227.056+	2.500000+	.3500000+	.002200	2022.6
.7184344+	.5565363+	.0252373+	1.290903+	299.4443+
.2807222+	95.87984+	3.123121+	.7325560+	.0021726+
1.29802+	13.85627+	.3627132+	.4951338+	.0351283+
1.019655+	.7325560+	10.0	1.049	

1228.056+	2.500000+	.3500000+	.002193	2022.6
.5868400+	.4651839+	.032762+	1.261506+	296.5249+
.4852542+	135.8544+	2.182666+	1.209344+	.0021633+
1.37556+	13.71197+	.3951106+	.3267148+	.0567041+
1.060772+	1.209344+	20.0	1.048	

1229.056+	.0000000+	.3500000+	.002188	2022.6
.5263777+	.4000633+	.0077037-	1.315735+	300.2570+
.4963170+	135.9806+	2.208086+	1.060570+	.0021594+
1.62486+	14.02442+	.3517833+	.3316902+	.0146354-
.014861+	1.060578+	20.0	1.049	

1230.056+	2.500000-	.3500000+	.002183	2022.6
.4765852+	.3340909+	.0314531-	1.426513+	300.5273+
.4960981+	136.1067+	2.208027+	.0606667+	.0021555+
1.64002+	14.01838+	.3185520+	.3315947+	.0659968-
1.015729+	.0606667+	20.0	1.049	

1231.056+	2.500000+	.4000000+	.002207	2022.6
.1351510+	.2503567+	.0092212-	.5398337+	.0001132+
.0000000+	95.85175+	.0000011+	.0000000+	.0022103+
.0000000+	.0000000+	.1351510+	.0000000+	.0562291-
.0000000+	.0000000+	10.0	1.000	

1232.056+	.0000000+	.4000000+	.002203	2022.6
.0782453+	.2368239+	.0651604-	.3303945+	.0001133+
.0000000+	95.79036+	.0000011+	.0000000+	.0022062+
.0000000+	.0000000+	.0782453+	.0000000+	.8327707-
.0000000+	.0000000+	10.0	1.000	

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1233.056+	2.500000+	.4000000+	.002200	2022.6
.0497924+	.1962255+	.1083851-	.2537512+	.0011348+
.0000000+	95.87984+	.0000118+	0000000+	.0022020+
.0000000+	.0000000+	.0497924+	.0000000+	2.176736-
0000000+	0000000+	10.0	1.000	
1234.056+	2.500000-	.4000000+	.002195	2022.6
.0391226+	.1818469+	.1290859-	.2151406+	.0001135+
.0000000+	135.7352+	.0000008+	0000000+	.0021979+
.0000000+	.0000000+	.0391226+	.0000000+	3.299518-
0000000+	0000000+	20.0	1.000	
1235.056+	.0000000+	.4000000+	.002188	2022.6
.1102547+	.2173705+	.0857036-	.5072204+	.0001138+
.0000000+	135.9877+	.0000008+	0000000+	.0021898+
.0000000+	.0000000+	.1102547+	.0000000+	.7773238-
0000000+	0000000+	20.0	1.000	
1236.056+	2.500000+	.4000000+	.002177	2022.6
.1636038+	.2486651+	.0381752-	.6579284+	.0001141+
.0000000+	136.3657+	.0000008+	0000000+	.0021777+
.0000000+	.0000000+	.1636038+	.0000000+	.2333392-
0000000+	0000000+	20.0	1.000	
1237.056+	2.500000+	.4000000+	.002154	2022.6
.1868903+	.2393168+	.0754359-	.7809324+	.0001146+
.0000000+	192.7563+	.0000005+	0000000+	.0021578+
.0000000+	.0000000+	.1868903+	.0000000+	.4036378-
0000000+	0000000+	40.0	1.000	
1238.056+	.0000000+	.4000000+	.002140	2022.6
.1204004+	.2175219+	.0964372-	.5535096+	.0001150+
.0000000+	193.4598+	.0000005+	0000000+	.0021421+
.0000000+	.0000000+	.1204004+	.0000000+	.8009703-
0000000+	0000000+	40.0	1.000	
1239.056+	2.500000-	.4000000+	.002133	2022.6
.0305493+	.2021372+	.1288383-	.1511318+	.0001152+
.0000000+	193.8106+	.0000005+	0000000+	.0021343+
.0000000+	.0000000+	.0305493+	.0000000+	4.217379-
0000000+	0000000+	40.0	1.000	
1243.056+	2.500000-	.4000000+	.002171	2022.6
.4196795+	.2706559+	.0868428-	1.550601+	139.6992+
.2183270+	96.59272+	1.446271+	1.922251+	.0020978+
10.52520+	3.084663+	.3444719+	.1792023+	.2069266-
4.580284+	1.922251+	10.0	1.010	

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1244.056+	.0000000+	.4000000+	.002164	2022.6
.4908116+	.3061795+	.0587912-	1.603019+	139.8230+
.2185205+	96.68145+	1.446224+	2.246066+	.0020941+
10.54386+	3.087397+	.4027931+	.1793326+	.1197836-
4.576229+	2.246066+	10.0	1.010	

1245.056+	2.500000+	.4000000+	.002159	2022.6
.5548305+	.3484695+	.0142073-	1.592192+	139.8230+
.2185205+	96.77011+	1.444899+	2.539031+	.0020941+
10.54386+	3.087397+	.4553313+	.1793326+	.0256066-
4.576229+	2.539031+	10.0	1.010	

1246.056+	2.500000+	.4000000+	.002152	2022.6
.4339059+	.3214039+	.2050265-	1.350033+	132.9493+
.1030123+	137.1112+	.9696463+	4.212173+	.0020897+
10.47705+	2.910848+	.3933826+	.0933918+	.4725136-
9.707572+	4.212173+	20.0	1.009	

1247.056+	.0000000+	.4000000+	.002142	2022.6
.3663304+	.2909551+	.0311141-	1.259061+	133.0667+
.1029570+	137.3611+	.9687363+	3.558089+	.0020853+
10.48433+	2.909286+	.3321348+	.0933464+	.0849345-
9.712785+	3.558089+	20.0	1.009	

1248.056+	2.500000-	.4000000+	.002142	2022.6
.3343210+	.2664269+	.0288694-	1.254831+	133.0667+
.1061744+	137.3611+	.9687363+	3.148788+	.0020853+
10.81196+	3.000201+	.3022317+	.0959834+	.0863525-
9.418458+	3.148788+	20.0	1.009	

1249.056+	2.500000-	.4000000+	.002108	2022.6
.2641622+	.2508553+	.0994124-	1.053046+	140.1937+
.0650049+	194.8489+	.7194995+	4.063722+	.0020809+
12.46153+	3.635459+	.2480385+	.0610372+	.3763311-
15.38343+	4.063722+	40.0	1.010	

1250.056+	0.000000+	.4000000+	.002102	2022.6
.3198699+	.2602570+	.0760967-	1.229053+	140.1937+
.0636036+	195.1977+	.7182159+	5.029110+	.0020809+
12.19290+	3.557090+	.3007416+	.0598001+	.2378989-
15.72235+	5.029110+	40.0	1.010	

1251.056+	2.500000+	.4000000+	.002102	2022.6
.3683895+	.2880349+	.0467736-	1.278975+	140.1937+
.0617352+	195.1972+	.7182159+	5.967245+	.0020816+
11.83059+	3.452598+	.3469693+	.0581456+	.1268320-
16.19819+	5.967245+	40.0	1.010	

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1252.056+	2.500000+	.4000000+	.002095	2022.6
.5139483+	.3991463+	.0180957+	1.287618+	303.7531+
.2536881+	195.5448+	1.553368+	2.025906+	.0021085+
22.15176+	14.18772+	.4099491+	.2023534+	.0352091+
3.941847+	2.025906+	40.0	1.049	

1253.056+	.0000000+	.4000000+	.002086	2022.6
.4672257+	.3512829+	.0083308-	1.330055+	307.7984+
.2609979+	195.8919+	1.571267+	1.790151+	.0021025+
22.55417+	14.59653+	.3705206+	.2069772+	.0178305-
3.831448+	1.790151+	40.0	1.050	

1254.056+	2.500000-	.4000000+	.002086	2022.6
.3989389+	.3166671+	.0426069-	1.259803+	307.7984+
.2609979+	195.8919+	1.571267+	1.528513+	.0021025+
22.55417+	14.59653+	.3163676+	.2069772+	.1068007-
3.831448+	1.528513+	40.0	1.050	

1255.056+	2.500000-	.4000000+	.002102	2022.6
.5157079+	.3594649+	.0281583+	1.434654+	304.5542+
.5024111+	138.7280+	2.195333+	1.026465+	.0020989+
22.20904+	14.19676+	.3432535+	.3344032+	.0546013+
1.990401+	1.026465+	20.0	1.049	

1256.056+	.0000000+	.4000000+	.002106	2022.6
.5085947+	.4161335+	.0857529+	1.222191+	304.5542+
.4960515+	138.6043+	2.197292+	1.025286+	.0020989+
21.92791+	14.01706+	.3399580+	.3315738+	.1686075+
2.015919+	1.025286+	20.0	1.049	

1257.056+	2.500000+	.4000000+	.002106	2022.6
.5690570+	.4846433+	.1416180+	1.174176+	304.8208+
.491305+	138.6043+	2.199216+	1.156313+	.0020952+
21.77363+	13.90626+	.3813721+	.3298173+	.2488643+
2.031981+	1.156313+	20.0	1.049	

1258.056+	2.500000+	.4000000+	.002107	2022.6
.688684+	.6005179+	.2357773+	1.137132+	308.3380+
.992229+	98.00290+	3.146212+	.6882164+	.0020966+
21.68458+	14.01884+	.3427659+	.4980497+	.3452749+
1.007831+	.6882164+	10.0	1.050	

1259.056+	.0000000+	.4000000+	.002107	2022.6
.5619438+	.5024051+	.2098119+	1.118507+	304.8208+
.9722007+	98.00290+	3.110324+	.5780121+	.0020959+
21.49943+	13.73587+	.2849323+	.4929522+	.3733681+
1.028594+	.5780121+	10.0	1.049	

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1260.056+	2.500000-	.4000000+	.002109	2022.6
.4694720+	.4364327+	.1745278+	1.075703+	301.5669+
.9611598+	97.91536+	3.079873+	.4884432+	.0020915+
21.52958+	13.57987+	.2393848+	.4900976+	.3717533+
1.040409+	.4884432+	10.0	1.048	

1264.056+	2.500000+	.5000000+	.002150	2020.5
.2276228+	.2503567+	.0167156-	.9091937+	.0001153+
.0000000+	97.00317+	.0000011+	0000000+	.0021283+
.0000000+	.0000000+	.2276228+	.0000000+	.0734358-
0000000+	0000000+	10.0	1.000	

1265.056+	.0000000+	.5000000+	.002145	2020.5
.0782453+	.2334407+	.0756653-	.3351828+	.0001153+
.0000000+	97.09164+	.0000011+	0000000+	.0021283+
.0000000+	.0000000+	.0782453+	.0000000+	.9670266-
0000000+	0000000+	10.0	1.000	

1266.056+	2.500000-	.5000000+	.002141	2020.5
.0142264+	.2029919+	.1185235-	.0700836+	.0001153+
.0000000+	97.18002+	.0000011+	0000000+	.0021283+
.0000000+	.0000000+	.0142264+	.0000000+	8.331225-
0000000+	0000000+	10.0	1.000	

1267.056+	2.500000-	.5000000+	.002127	2020.5
.0142264+	.1843843+	.0865066-	.0771563+	.0000115+
.0000000+	137.9394+	.0000000+	0000000+	.0021283+
.0000000+	.0000000+	.0142264+	.0000000+	6.080700-
0000000+	0000000+	20.0	1.000	

1268.056+	.0000000+	.5000000+	.002123	2020.5
.1102547+	.2131415+	.0440824-	.5172843+	.0000115+
.0000000+	138.0638+	.0000000+	0000000+	.0021283+
.0000000+	.0000000+	.1102547+	.0000000+	.3998235-
0000000+	0000000+	20.0	1.000	

1269.056+	2.500000+	.5000000+	.002118	2020.5
.2098397+	.2418987+	.0059897-	.8674693+	.0001153+
.0000000+	138.1881+	.0000008+	0000000+	.0021283+
.0000000+	.0000000+	.2098397+	.0000000+	.0285445-
0000000+	0000000+	20.0	1.000	

1270.056+	2.500000+	.5000000+	.002099	2020.5
.2156426+	.2354707+	.0891979-	.9157940+	.0001153+
.0000000+	195.3100+	.0000005+	0000000+	.0021283+
.0000000+	.0000000+	.2156426+	.0000000+	.4136377-
0000000+	0000000+	40.0	1.000	

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1271.056+	.0000000+	.5000000+	.002088	2020.5
.1275885+	.2158125+	.1082859-	.5912009+	.0001153+
.0000000+	195.8315+	.0000005+	0000000+	.0021283+
.0000000+	.0000000+	.1275885+	.0000000+	.8487123-
0000000+	0000000+	40.0	1.000	

1272.056+	2.500000-	.5000000+	.002078	2020.5
.0215642+	.1982911+	.1431168-	.1087505+	.0001153+
.0000000+	212.8042+	.0000005+	0000000+	.0021283+
.0000000+	.0000000+	.0215642+	.0000000+	6.636760-
0000000+	0000000+	40.0	1.000	

1276.056+	2.500000-	.5000000+	.002108	2020.5
.4125663+	.2368239+	.0912449-	1.742080+	133.1840+
.2040464+	97.96676+	1.359482+	2.021923+	.0020809+
10.40202+	2.882897+	.3426496+	.1594672+	.2211642-
4.900845+	2.021923+	10.0	1.009	

1277.056+	.0000000+	.5000000+	.002108	2020.5
.4125663+	.2977215+	.0014791+	1.385745+	133.5353+
.1969529+	97.96676+	1.363067+	2.094745+	.0020692+
10.07040+	2.782677+	.3446804+	.1645453+	.0035851+
5.077353+	2.094745+	10.0	1.009	

1278.056+	2.500000+	.5000000+	.002108	2020.5
.4908116+	.3450863+	.0313537+	1.422286+	133.5353+
.1969529+	97.96676+	1.363067+	2.492024+	.0020700+
10.06688+	2.782677+	.4100509+	.1645453+	.0638814+
5.077353+	2.492024+	10.0	1.009	

1279.056+	2.500000+	.5000000+	.002100	2020.5
.4054531+	.3087169+	.0136216+	1.313348+	125.4455+
.0962330+	138.8008+	.9037805+	4.213240+	.0020649+
10.49763+	2.719284+	.3698603+	.0877852+	.0335962+
10.39143+	4.213240+	20.0	1.008	

1280.056+	.0000000+	.5000000+	.002098	2020.5
.3556606+	.2816513+	.0185368-	1.262769+	133.7689+
.1024712+	138.9244+	.9628899+	3.470832+	.0020613+
10.50097+	2.895558+	.3226030+	.0929468+	.0521195-
9.758833+	3.470832+	20.0	1.009	

1281.056+	2.500000-	.5000000+	.002098	2020.5
.3200945+	.2545857+	.0483106-	1.257315+	133.7689+
.1054116+	138.9244+	.9628899+	3.036615+	.0020613+
10.80223+	2.978645+	.2895704+	.0953596+	.1509260-
9.486619+	3.036615+	20.0	1.009	

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1282.056+ .2587711+ .0649 09+ 12.49770+ 15.40334+	2.500000- .2337612+ 196.5144+ 3.630761+ 3.955940+	.5000000+ .1060875- .7159094+ .2429956+ 40.0	.002075 1.106989+ 3.985940+ .0109631+ 1.010	2020.5 140.6865+ .0020619+ .4099666-
1283.056+ .3001027+ .0585577+ 11.86623+ 17.07714+	.0000000+ .2487185+ 196.8601+ 3.274894+ 5.124898+	.5000000+ .0668250- .6789197+ .2835014+ 40.0	.002068 1.206595+ 5.124898+ .0553154+ 1.009	2020.5 133.6522+ .0020649+ .2226739-
1284.056+ .3450287+ .0567765+ 11.50528+ 17.61190+	2.500000+ .2799152+ 197.2051+ 3.175277+ 6.075948+	.5000000+ .0468039- .6777318+ .3264912+ 40.0	.002059 1.232616+ 6.076948+ .0337161+ 1.009	2020.5 133.6522+ .0020649+ .1356525-
1288.056+ .5903966+ .9563470+ 21.43999+ 1.045645+	2.500000+ .4973303+ 98.17623+ 13.51187+ .6173456+	.5000000+ .0761790+ 3.069008+ .3017552+ 10.0	.002099 1.187131+ .6173456+ .4688432+ 1.048	2019.1 301.3036+ .0020916+ .1290302+
1289.056+ .5334909+ .9923013+ 21.98177+ 1.007758+	.0000000+ .4110587+ 98.26369+ 14.01986+ .5376299+	.5000000+ .0479286- 3.102069+ .2677762+ 10.0	.002097 1.297845+ .5376299+ .4930679+ 1.049	2019.1 304.8208+ .0020923+ .0898397-
1290.056+ .4481324+ .9923013+ 21.98177+ 1.007758+	2.500000- .3332451+ 98.26369+ 14.01986+ .4516091+	.5000000+ .0717004- 3.102069+ .2249320+ 10.0	.002097 1.344752+ .4516091+ .4930679+ 1.049	2019.1 304.8208+ .0020923+ .1599984-
1291.056+ .4090097+ .4989313+ 22.12428+ 2.004283+	2.500000- .3188665+ 139.0967+ 14.09843+ .8197716+	.5000000+ .0380384- 2.193345+ .2728875+ 20.0	.002091 1.282698+ .8197716+ .3328580+ 1.049	2019.1 305.0871+ .0020887+ .0930014-

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1292.056+	.0000000+	.5000000+	.002087	2019.1
.4836984+	.3746893+	.0060413-	1.290931+	301.3036+
.4900947+	139.2202+	2.164223+	.9869489+	.0020916+
21.97450+	13.64874+	.3246092+	.3289017+	.0124898-
2.040421+	.9869489+	20.0	1.048	

1293.056+	2.500000+	.5000000+	.002078	2019.1
.5050381+	.4322037+	.0392383+	1.168518+	304.5542+
.4953820+	139.4668+	2.183703+	1.019492+	.0020953+
21.93609+	13.99814+	.3377318+	.3312745+	.0776938+
2.018643+	1.01949+	20.0	1.049	

1294.056+	2.500000+	.5000000+	.002062	2019.1
.4690227+	.3726505+	.0017145-	1.258612+	301.0401+
.2504193+	197.0913+	1.527414+	1.872949+	.0020945+
22.21054+	14.08491+	.3750924+	.2002682+	.0036555-
3.993302+	1.872949+	40.0	1.048	

1295.056+	.0000000+	.5000000+	.002053	2019.1
.4223002+	.3354709+	.0182058-	1.258827+	301.3036+
.2513077+	197.6084+	1.524750+	1.680410+	.0020909+
22.30885+	14.05460+	.3374870+	.2008360+	.0431111-
3.979184+	1.670410+	40.0	1.048	

1296.056+	2.500000-	.5000000+	.002048	2019.1
.3665925+	.3012828+	.0543024-	1.216772+	301.3036+
.2533155+	197.7805+	1.523424+	1.447177+	.0020901+
22.49484+	14.16688+	.2924981+	.2021163+	.1481276-
3.947645+	1.447177+	40.0	1.048	

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT
AND A JET CONVERGENCE ANGLE OF 30°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP
C_L	C_D	C_M	L/D	V_j
C_μ	V_o	V_j/V_o	A	ρ_l
Q	ΔV_j	C_L'	C_μ'	C_M/C_L
$1/C_\mu$	A	q	P_M/P_o	

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

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1297.053+	2.500000+	.5000000+	.002222	2010.6
.2133963+	.2554315+	.0032270+	.8354346+	.0001126+
.0000000+	95.44575+	.0000011+	0000000+	.0022221+
.0000000+	.0000000+	.2133963+	.0000000+	.0151225+
0000000+	0000000+	10.0	1.000	

1298.053+	.0000000+	.5000000+	.002217	2010.6
.1066981+	.2300575+	.0419788-	.4637890+	.0011274+
.0000000+	95.53609+	.0000118+	0000000+	.0022179+
.0000000+	.0000000+	.1066981+	.0000000+	.3934352-
0000000+	0000000+	10.0	1.000	

1299.053+	2.500000-	.5000000+	.002217	2010.6
.0355660+	.2080667+	.0718127-	.1709358+	.0001127+
.0000000+	95.53609+	.0000011+	0000000+	.0022179+
.0000000+	.0000000+	.0355660+	.0000000+	2.019137-
0000000+	0000000+	10.0	1.000	

1300.053+	2.500000-	.5000000+	.002207	2010.6
.0426792+	.1903049+	.1093453-	.2242677+	.0011295+
.0000000+	135.3778+	.0000083+	0000000+	.0022096+
.0000000+	.0000000+	.0426792+	.0000000+	2.562024-
0000000+	0000000+	20.0	1.000	

1301.053+	.0000000+	.5000000+	.002203	2010.6
.1458208+	.2182163+	.0869707-	.6682397+	.0001130+
.0000000+	135.5053+	.0000008+	0000000+	.0022054+
.0000000+	.0000000+	.1458208+	.0000000+	.5964218-
0000000+	0000000+	20.0	1.000	

1302.053+	2.500000+	.5000000+	.002200	2010.6
.2205095+	.2427445+	.0470193-	.9084017+	.0001131+
.0000000+	135.6326+	.0000008+	0000000+	.0022013+
.0000000+	.0000000+	.2205095+	.0000000+	.2132304-
0000000+	0000000+	20.0	1.000	

1303.053+	2.500000+	.5000000+	.002175	2010.6
.2210337+	.2350433+	.0882379-	.9403955+	.0001138+
.0000000+	191.9030+	.0000005+	0000000+	.0021768+
.0000000+	.0000000+	.2210337+	.0000000+	.3992056-
0000000+	0000000+	40.0	1.000	

1304.053+	.0000000+	.5000000+	.002164	2010.6
.1329796+	.2132484+	.1028949-	.6235902+	.0001141+
.0000000+	192.4363+	.0000005+	0000000+	.0021647+
.0000000+	.0000000+	.1329796+	.0000000+	.7737643-
0000000+	0000000+	40.0	1.000	

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1305.053+	2.500000-	.5000000+	.002157	2010.6
.0377374+	.2042740+	.1254249-	.1847394+	.0001143+
.0000000+	192.7911+	.0000005+	0000000+	.0021568+
.0000000+	.0000000+	.0377374+	.0000000+	3.323618-
0000000+	0000000+	40.0	1.000	

1309.053+	2.500000-	.5000000+	.002188	2010.6
.3272077+	.2757307+	.0592109-	1.186693+	130.9375+
.2115414+	96.15611+	1.361577+	1.546778+	.0021409+
10.66177+	2.988792+	.2700755+	.1746052+	.1809581-
4.72720+	1.546778+	10.0	1.009	

1310.053+	.0000000+	.5000000+	.002188	2010.6
.4481324+	.2757307+	.0750761-	1.625253+	131.0567+
.2117340+	96.16611+	1.362816+	2.116487+	.0021377+
10.67741+	2.991513+	.3698273+	.1747364+	.1675312-
4.727905+	2.116487+	10.0	1.009	

1311.053+	2.500000+	.5000000+	.002186	2007.8
.3129813+	.2757307+	.1251084-	1.135097+	124.0461+
.1851385+	96.14403+	1.290211+	1.690525+	.0021371+
9.866768+	2.615755+	.2640884+	.1562168+	.3997314-
5.401359+	1.690525+	10.0	1.008	

1312.053+	2.500000+	.5000000+	.002173	2007.8
.2738586+	.2283659+	.1653980-	1.199209+	124.3545+
.1066289+	136.4827+	.9113576+	2.568333+	.001148+
11.40037+	3.013043+	.2474711+	.0963547+	.6039538-
9.378317+	2.568333+	20.0	1.009	

1313.053+	.0000000+	.5000000+	.002168	2007.8
.3556606+	.2478193+	.0973017-	1.435160+	131.4137+
.1161209+	136.6092+	.9619676+	3.062345+	.0021224+
11.76416+	3.281261+	.3186577+	.1040397+	.2735886-
8.611709+	3.062845+	20.0	1.009	

1314.053+	2.500000-	.5000000+	.002164	2007.8
.2738586+	.2292117+	.0970689-	1.194784+	131.4137+
.1161209+	136.7357+	.9610781+	2.358391+	.0021217+
11.76830+	3.281261+	.2453664+	.1040397+	.3544491-
8.611709+	2.358391+	20.0	1.009	

1315.053+	2.500000-	.5000000+	.002136	2007.8
.2084545+	.2239322+	.1195906-	.9308824+	138.4552+
.0724255+	193.6246+	.7150703+	2.878190+	.0021163+
13.82289+	4.050461+	.1943767+	.0675343+	.5737014-
13.80728+	2.878190+	40.0	1.010	

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1316.053+	.0000000+	.5000000+	.002132	2007.8
.2641622+	.2307698+	.0865313-	1.144700+	138.455 +
.0691963+	193.8012+	.7144186+	3.817572+	.0021163+
13.20659+	3.869867+	.2470661+	.0647181+	.3275690-
14.45162+	3.817572+	40.0	1.010	
1317.053+	2.500000+	.5000000+	.002132	2007.8
.3414342+	.2555562+	.0737991-	1.336043+	138.4552+
.0677355+	193.8012+	.7144186+	5.040692+	.0021171+
12.92323+	3.788170+	.3197741+	.0634385+	.2161446-
14.76329+	5.040692+	40.0	1.010	
1318.053+	2.500000+	.5000000+	.002121	2007.8
.4402704+	.3239324+	.0183766-	1.359142+	299.9863+
.2700325+	194.3198+	1.543776+	1.630434+	.0021454+
23.46442+	15.10179+	.3466607+	.216185+	.0417395-
3.703257+	1.630434+	40.0	1.049	
1319.053+	.0000000+	.5000000+	.002118	2007.8
.3809687+	.2940178+	.0335071-	1.295733+	300.5273+
.2718545+	194.4957+	1.545161+	1.401369+	.0021377+
23.66535+	15.20369+	.2995379+	.2137465+	.0879525-
3.678437+	1.401369+	40.0	1.049	
1320.053+	2.500000-	.5000000+	.002126	2006.4
.3001027+	.2692314+	.0916580-	1.114664+	296.6021+
.2694568+	194.0358+	1.548594+	1.113732+	.0021587+
23.53508+	15.06960+	.2364024+	.212615+	.3054224-
3.711169+	1.113732+	40.0	1.048	
1321.053+	2.500000-	.5000000+	.002131	2006.4
.3592172+	.3645397+	.0304997-	.9853993+	299.1730+
.530039+	137.7842+	2.171314+	.6752153+	.0021563+
23.30226+	15.03298+	.2344754+	.3472601+	.0849061-
1.879685+	.6752153+	20.0	1.049	
1322.053+	.0000000+	.5000000+	.002131	2006.4
.4267927+	.3205581+	.0522534-	1.331405+	299.4443+
.5265626+	137.7842+	2.173284+	.8105260+	.0021524+
23.08484+	14.87922+	.2795776+	.3449335+	.124328-
1.899109+	.8105260+	20.0	1.049	
1323.053+	2.500000+	.5000000+	.002131	2006.4
.5192645+	.3738435+	.0159103+	1.328988+	299.7155+
.5263805+	137.7842+	2.175251+	.9864811+	.0021485+
23.09776+	14.87408+	.3401933+	.3448554+	.0306402+
1.899766+	.9864811+	20.0	1.049	

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1324.053+	2.500000+	.5000000+	.002136	2006.4
.5050381+	.4381243+	.0532417+	1.152727+	299.9863+
1.053053+	97.33427+	3.082021+	.4795940+	.0011446+
23.12504+	14.87820+	.2459936+	.5119105+	.1054211+
.9496196+	.4795940+	10.0	1.049	

1325.053+	.0000000+	.5000000+	.002142	2006.4
.4125663+	.3535443+	.0354391-	1.166943+	297.6787+
1.040371+	97.15649+	3.063910+	.3965563+	.0011446+
23.02368+	14.69904+	.2020114+	.5098934+	.0858991-
.9611941+	.3965563+	10.0	1.048	

1326.053+	2.500000-	.5000000+	.002142	2006.4
.3485474+	.2841887+	.0414169-	1.276464+	297.6787+
1.040371+	97.15649+	3.063910+	.3350217+	.0011446+
23.02368+	14.69904+	.1700253+	.5098934+	.1188271-
.9611941+	.3350217+	10.0	1.048	

1330.053+	2.500000+	.4000000+	.002172	2006.4
.2062831+	.2503567+	.0005129+	.0239568+	.0001138+
.0000000+	96.53679+	.0000011+	.0000000+	.0021722+
.0000000+	.0000000+	.2062831+	.0000000+	.004865+
.0000000+	.0000000+	10.0	1.000	

1331.053+	.0000000+	.4000000+	.002172	2006.4
.1351510+	.2334407+	.0486011-	.5789521+	.0001138+
.0000000+	96.53679+	.0000011+	.0000000+	.0021722+
.0000000+	.0000000+	.1351510+	.0000000+	.3596352-
.0000000+	.0000000+	10.0	1.000	

1332.053+	2.500000-	.4000000+	.002172	2006.4
.0142264-	.2131415+	.1042121-	.0667463-	.0001138+
.0000000+	96.53679+	.0000011+	.0000000+	.0021722+
.0000000+	.0000000+	.0142264-	.0000000+	7.374947+
.0000000+	.0000000+	10.0	1.000	

1333.053+	2.500000-	.4000000+	.002159	2006.4
.0071131+	.1903049+	.1295430-	.0373779+	.0001138+
.0000000+	136.9102+	.0000000+	.0000000+	.0021602+
.0000000+	.0000000+	.0071131+	.0000000+	18.1161-
.0000000+	.0000000+	20.0	1.000	

1334.053+	.0000000+	.4000000+	.002155	2006.4
.1458204+	.2156789+	.1036097-	.6761014+	.0001138+
.0000000+	137.0365+	.0000000+	.0000000+	.001562+
.0000000+	.0000000+	.1458204+	.0000000+	.710579-
.0000000+	.0000000+	20.0	1.000	

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1335.053+ .2205005+ .0000000+ .0000000+ 0000000+	2.500000+ .2385155+ 137.1626+ .0000000+ 0000000+	.4000000+ .0601504- .0000000+ .2205095+ 20.0	.002153 .9245081+ 0000000+ .0000000+ 1.000	2006.4 .0001113+ .0021522+ .277794-
1336.053+ .2228307+ .0000000+ .0000000+ 0000000+	2.500000+ .2363254+ 193.8794+ .0000000+ 0000000+	.4000000+ .0786906- .0000000+ .2228307+ 40.0	.002130 .9428920+ 0000000+ .0000000+ 1.000	2006.4 .0001111+ .0021326+ .353161-
1337.053+ .1491527+ .0000000+ .0000000+ 0000000+	.0000000+ .2209407+ 194.2326+ .0000000+ 0000000+	.4000000+ .1042393- .0000000+ .1491528+ 40.0	.002123 .6750807+ 0000000+ .0000000+ 1.000	2006.4 .0001110+ .0021249+ .6988796-
1338.053+ .0287523+ .0000000+ .0000000+ 0000000+	2.500000- .2059834+ 194.7607+ .0000000+ 0000000+	.4000000+ .1423716- .0000000+ .0287523+ 40.0	.002112 .1395857+ 0000000+ .0000000+ 1.000	2006.4 .0001113+ .0021134+ 4.951653-
1342.053+ .4125663+ .2221652+ 10.70447+ 4.501153+	2.500000- .2435903+ 97.16163+ 3.138892+ 1.857024+	.4000000+ .0395737- 1.424999+ .3375700+ 10.0	.002142 1.693692+ 1.857024+ .1817800+ 1.010	2006.4 138.4552+ .0021178+ .0959210-
1343.053+ .4552456+ .2221652+ 10.70447+ 4.501153+	.0000000+ .2740391+ 97.16163+ 3.138892+ 2.049130+	.4000000+ .0057680- 1.424999+ .3724910+ 10.0	.002142 1.661242+ 2.049130+ .1817800+ 1.010	2006.4 138.4552+ .0021178+ .0126702-
1344.053+ .5192645+ .2223656+ 10.72379+ 4.497096+	2.500000+ .3078711+ 97.25056+ 3.141724+ 2.335182+	.4000000+ .0344544+ 1.424980+ .4248029+ 10.0	.002138 1.626629+ 2.335182+ .1819142+ 1.010	2006.4 138.5801+ .0021140+ .0663524+
1345.053+ .4267927+ .1122794+ 11.40355+ 8.906349+	2.500000+ .2858803+ 137.7915+ 3.172710+ 3.801165+	.4000000+ .0044317- .9554369+ .3837100+ 20.0	.002130 1.492906+ 3.801165+ .1009453+ 1.009	2006.4 131.6511+ .0021133+ .0103843-

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1346.053+	.0000000+	.4000000+	.002126	2006.4
.359217+	.2520483+	.0425131-	1.425191+	131.6511+
.1160413+	137.9169+	.9545679+	3.095596+	.0021125+
11.78970+	3.279013+	.3218673+	.1039758+	.1183493-
8.617615+	3.095596+	20.0	1.009	

1347.053+	2.500000-	.4000000+	.002123	2006.4
.2809719+	.2309033+	.0763684-	1.216837+	131.6511+
.1160413+	138.0423+	.9537013+	2.411307+	.001125+
11.78970+	3.279013+	.2517576+	.1039758+	.2718723-
8.617615+	2.411307+	20.0	1.009	

1348.053+	2.500000-	.4000000+	.002112	2006.4
.1940783+	.2269236+	.1049660-	.8552584+	131.6511+
.0655034+	194.7504+	.6759992+	2.962872+	.001103+
13.18555+	3.663336+	.1821471+	.0614765+	.5408438-
15.06637+	2.962872+	40.0	1.009	

1349.053+	.0000000+	.4000000+	.002130	2006.4
.2731473+	.2354707+	.0695989-	1.160005+	138.5801+
.0689503+	195.1016+	.7102971+	3.961470+	.0021110+
13.18090+	3.856143+	.2555284+	.0645034+	.2548036-
14.50305+	3.961470+	40.0	1.010	

1350.053+	2.500000+	.4000000+	.002096	2006.4
.3558103+	.2576929+	.0503691-	1.360753+	138.5801+
.0677197+	195.4522+	.7090230+	5.254161+	.001118+
12.94097+	3.787383+	.3332432+	.0634246+	.1415616-
14.76674+	5.254161+	40.0	1.010	

1354.053+	2.500000+	.4000000+	.002229	2001.4
.6615267+	.4262831+	.0317574+	1.551552+	291.5499+
1.018952+	95.30001+	3.059285+	.6492243+	.0021780+
22.67109+	14.39640+	.3276594+	.5046936+	.0480062+
.9814000+	.6492243+	10.0	1.047	

1355.053+	.0000000+	.4000000+	.002218	2001.4
.5761702+	.3433947+	.0121515-	1.677865+	295.5216+
1.032183+	95.48170+	3.095060+	.5582049+	.0021700+
22.74013+	14.58335+	.2835226+	.5079185+	.0210906-
.9688195+	.5582049+	10.0	1.048	

1356.053+	2.500000-	.4000000+	.002218	2001.4
.3627738+	.2808055+	.0123053-	1.291904+	295.5216+
1.032833+	95.48170+	3.095060+	.3512413+	.001693+
22.76237+	14.59255+	.1784572+	.5060758+	.0339101-
.9682102+	.3512413+	10.0	1.048	

S.E.M.
FORCE

1317.053+	2.500000-	.4000000+	.002206	2001.4
.3608870+	.2941887+	.0376950-	1.301554+	295.5216+
.5196646+	135.4202+	2.182246+	.7117802+	.0011685+
22.91351+	14.68430+	.2434004+	.3419600+	.1289448-
1.974317+	.7117802+	20.0	1.043	
1318.053+	.0000000+	.4000000+	.002197	2001.4
.1659154+	.3180707+	.0267451-	1.465047+	295.7921+
.5201403+	135.6765+	2.180126+	.3957494+	.0011653+
22.94742+	14.69774+	.3064950+	.341659+	.0574033-
1.922558+	.8957494+	20.0	1.043	
1319.053+	2.500000+	.4000000+	.002197	2001.4
.5141607+	.3687687+	.1800815+	1.475615+	295.7921+
.5168894+	135.6765+	2.180126+	1.052760+	.0011661+
22.79611+	14.60582+	.3587346+	.3407561+	.3309345+
1.934649+	1.052760+	20.0	1.043	
1360.053+	2.500000+	.4000000+	.002169	2001.4
.4699212+	.3294880+	.0117863-	1.426216+	292.6198+
.2591767+	192.1446+	1.52914+	1.813130+	.0021614+
22.91759+	14.49467+	.3731972+	.2058302+	.0250815-
3.858371+	1.813130+	40.0	1.047	
1361.053+	.0000000+	.4000000+	.002160	2001.4
.3881567+	.2970093+	.0362925-	1.306884+	292.6198+
.7603141+	192.5014+	1.520091+	1.491109+	.0021606+
23.02619+	14.55829+	.3079841+	.2065470+	.0934997-
3.834151+	1.491109+	40.0	1.047	
1362.053+	2.500000-	.4000000+	.002154	2001.4
.3018997+	.2770605+	.0622205-	1.081543+	292.6198+
.7635640+	192.8576+	1.517284+	1.145451+	.001598+
23.32179+	14.74004+	.2389271+	.2085077+	.2060968-
3.754144+	1.145451+	40.0	1.047	
1363.053+	2.500000+	.3500000+	.002203	2002.1
.7133963+	.2538895+	.0362134-	.8086578+	.0001128+
.0000000+	95.82883+	.0000011+	0000000+	.0022044+
.0000000+	.0000000+	.2133963+	.0000000+	.1697005-
0000000+	0000000+	10.0	1.000	
1364.053+	.0000000+	.3500000+	.002203	2002.1
.1123774+	.235155+	.0676945-	.6262797+	.0001128+
.0000000+	95.82883+	.0000011+	0000000+	.0022044+
.0000000+	.0000000+	.1493774+	.0000000+	.4531778-
0000000+	0000000+	10.0	1.000	

G.E.M.
FORCE

1365.053+ .0000000+ .0000000+ .0000000+ 0000000+	2.500000- .114499+ 15.82883+ .0000000+ 0000000+	.3500000+ .1008269- .0000117+ .0284528+ 10.0	.002203 .1345606+ 0000000+ .0000000+ 1.000	2002.1 .0011285+ .0022044+ 3.543649-
1366.053+ .0391220+ .0000000+ .0000000+ 0000000+	2.500000- .1953797+ 135.7650+ .0000000+ 0000000+	.3500000+ .1089673- .0000000+ .0391226+ 20.0	.002193 .002390+ 0000000+ .0000000+ 1.000	2002.1 .0001130+ .0021961+ 2.785273-
1367.053+ .1422642+ .0000000+ .0000000+ 0000000+	.0000000+ .224453+ 135.9126+ .0000000+ 0000000+	.3500000+ .0843337- .0000000+ .1422642+ 20.0	.002191 .6395469+ 0000000+ .0000000+ 1.000	2002.1 .0001131+ .0021920+ .5963465-
1368.053+ .2133963+ .0000000+ .0000000+ 0000000+	2.500000+ .2469735+ 136.0400+ .0000000+ 0000000+	.3500000+ .0493162- .0000000+ .2133963+ 20.0	.002184 .8640453+ 0000000+ .0000000+ 1.000	2002.1 .0001132+ .0021879+ .2311017-
1369.053+ .1886873+ .0000000+ .0000000+ 0000000+	2.500000+ .2418809+ 132.4878+ .0000000+ 0000000+	.3500000+ .0796221- .0000059+ .1886873+ 40.0	.002161 .7800833+ 0000000+ .0000000+ 1.000	2002.1 .0011391+ .0021636+ .4219790-
1370.053+ .1333707+ .0000000+ .0000000+ 0000000+	.0000000+ .2217954+ 192.8440+ .0000000+ 0000000+	.3500000+ .0962007- .0000005+ .1333707+ 40.0	.002155 .6238663+ 0000000+ .0000000+ 1.000	2002.1 .0001141+ .0021556+ .6952392-
1371.053+ .0269553+ .0000000+ .0000000+ 0000000+	2.500000- .2072654+ 133.0218+ .0000000+ 0000000+	.3500000+ .1306694- .0000005+ .0269553+ 40.0	.002150 .1300521+ 0000000+ .0000000+ 1.000	2002.1 .0001142+ .0021516+ 4.847629-
1375.053+ .3283399+ .2105775+ 10.69685+ 4.748843+	2.500000- .2740391+ 96.00947+ 2.975174+ 1.891654+	.3500000+ .0810103- 1.368757+ .3290494+ 10.0	.002194 1.453587+ 1.891654+ 1.739480+ 1.009	2002.1 131.4137+ .0021164+ .2033697-

G.E.M.
FORCE

1376.053+	.0000000+	.3500000+	.002180	2002.1
.4552456+	.2824971+	.0758699-	1.011505+	138.4552+
.2218609+	96.77979+	1.438050+	2.051941+	.0021134+
10.71242+	3.134592+	.375838+	.1815762+	.1566572-
4.507328+	2.051941+	10.0	1.010	

1377.053+	2.500000+	.3500000+	.002178	2002.1
.5406011+	.3230955+	.0581473-	1.673202+	138.5801+
.2220610+	96.36973+	1.438004+	2.434484+	.0021096+
10.73175+	3.137420+	.443708+	.1817102+	.1075599-
4.503265+	2.434484+	10.0	1.010	

1378.053+	2.500000+	.3500000+	.002170	2002.1
.4445757+	.2926467+	.0532617-	1.519154+	131.7696+
.1119460+	136.5486+	.9650018+	3.971338+	.0021050+
11.40401+	3.163291+	.3998177+	.1006758+	.1198034-
8.932871+	3.971338+	20.0	1.009	

1379.056+	.0000000+	.3500000+	.002161	2002.1
.3449908+	.2655811+	.0663911-	1.299003+	131.8881+
.1119017+	136.8022+	.9640789+	3.082979+	.0021005+
11.41376+	3.162038+	.3102709+	.1006399+	.1924431-
8.936409+	3.082979+	20.0	1.009	

1380.053+	2.500000-	.3500000+	.002161	2002.1
.2703020+	.2477445+	.1032801-	1.113524+	131.8881+
.1150906+	136.8022+	.9640789+	2.348601+	.0021005+
11.73903+	3.252148+	.2424036+	.1032119+	.3870915-
8.688801+	2.348601+	20.0	1.009	

1381.053+	2.500000-	.3500000+	.002132	2002.1
.1976774+	.2329065+	.1173238-	.8427198+	132.0064+
.0670730+	193.7212+	.6814250+	2.947123+	.0020879+
13.60987+	3.751115+	.1852473+	.0628570+	.5935267-
14.90912+	2.947123+	40.0	1.009	

1382.053+	.0000000+	.3500000+	.002130	2002.1
.2839295+	.2448724+	.0933743-	1.159499+	138.7541+
.0706031+	193.8981+	.7165347+	4.01483+	.0020953+
13.56183+	3.948543+	.2652051+	.0659471+	.3288644-
14.16366+	4.021483+	40.0	1.010	

1383.053+	2.500000+	.3500000+	.002125	2002.1
.3629984+	.2700861+	.0726511-	1.344009+	138.9541+
.0689827+	194.0750+	.7159818+	5.262161+	.0020960+
13.24590+	3.857920+	.3325737+	.0645312+	.2001417-
14.49637+	5.262161+	40.0	1.010	

G.E.M.
FORCE

1384.053+	2.500000+	.3500000+	.002114	2002.1
.4816019+	.3367530+	.0001343-	1.430134+	299.0130+
.262353+	194.6045+	1.536547+	1.835695+	.0021196+
23.14060+	14.67236+	.3815110+	.2078291+	.0002788-
3.511645+	1.835695+	40.0	1.048	

1385.053+	.0000000+	.3500000+	.002112	2002.1
.4007359+	.3012826+	.0269448+	1.330092+	299.2864+
.2664100+	194.7807+	1.536529+	1.504202+	.0021150+
23.53690+	14.89925+	.3164343+	.2103668+	.0672383+
3.753590+	1.504202+	40.0	1.048	

1386.053+	2.500000-	.3500000+	.002107	2002.1
.3270560+	.2884627+	.0481756-	1.133792+	297.5535+
.2669813+	194.9567+	1.536512+	1.225021+	.0011113+
23.60835+	14.93116+	.2581395+	.2107224+	.1472999-
3.745579+	1.225021+	40.0	1.048	

1387.053+	2.500000-	.3500000+	.002122	2002.1
.4000097+	.2934925+	.0152709-	1.393594+	302.1445+
.5253335+	138.0557+	2.188568+	.775714+	.001082+
23.30339+	14.84449+	.2681444+	.3444057+	.0446712-
1.903552+	.7785714+	20.0	1.049	

1388.053+	.0000000+	.3500000+	.002122	2002.1
.5157079+	.3391657+	.0176912+	1.520518+	302.4113+
.5251360+	138.0557+	2.120515+	.9820463+	.001060+
23.29011+	14.83591+	.3381389+	.3443707+	.0343047+
1.904268+	.9820463+	20.0	1.049	

1389.053+	2.500000+	.3500000+	.002122	2002.1
.5655004+	.3966801+	.0546000+	1.425582+	300.3534+
.5209988+	138.0557+	2.175594+	1.085624+	.001022+
23.31095+	14.71918+	.3718198+	.3424940+	.0965516+
1.919758+	1.085624+	20.0	1.048	

1390.053+	2.500000+	.3500000+	.002131	2002.1
.6473023+	.4770311+	.1278135+	1.356039+	302.9499+
1.045806+	97.43736+	3.109176+	.6171800+	.0010985+
23.30789+	14.81820+	.3159412+	.5119109+	.1974557+
.9534648+	.6171800+	10.0	1.049	

1391.053+	.0000000+	.3500000+	.002133	2002.1
.5192645+	.3890679+	.0850833+	1.334637+	300.6195+
1.040736+	97.34842+	3.068078+	.4967384+	.0010978+
23.31600+	14.70421+	.2544493+	.5099813+	.1638536+
.9608560+	.4989384+	10.0	1.048	

G.E.M.
FORCE

1392.053+ .4054531+ 1.039013+ 23.29795+ .9624512+	.2500000- .3264787+ 97.25939+ 14.67084+ .3902780+	.3500000+ .0600120+ 3.093639+ .1988476+ 10.0	.002138 1.241897+ .3902780+ .5075668+ 1.048	2002.1 300.8854+ .000941+ .1420122+
1396.053+ .2347360+ .0000000+ .0000000+ 0000000+	2.500000+ .2571231+ 96.45495+ .0000000+ 0000000+	.3000000+ .0262698- .0000011+ .2347360+ 10.0	.002174 .9129321+ 0000000+ .0000000+ 1.000	1998.6 .0001134+ .001797+ .1119122-
1397.053+ .1138114+ .0000000+ .0000000+ 0000000+	.0000000+ .2317491+ 96.45495+ .0000000+ 0000000+	.3000000+ .0935714- .0000011+ .1138114+ 10.0	.002174 .4910973+ 0000000+ .0000000+ 1.000	1998.6 .0001134+ .001797+ .821622-
1398.053+ .0142264+ .0000000+ .0000000+ 0000000+	2.500000- .2131415+ 96.54489+ .0000000+ 0000000+	.3000000+ .0957692- .0000011+ .0142264+ 10.0	.002170 .0667463+ 0000000+ .0000000+ 1.000	1998.6 .0001135+ .001797+ 6.731705-
1399.053+ .0000000+ .0000000+ .0000000+ 0000000+	2.500000- .1996087+ 136.9232+ .0000000+ 0000000+	.3000000+ .1292232- .0000008+ .0000000+ 20.0	.002158 .0000000+ 0000000+ .0000000+ 1.000	1998.6 .0001139+ .001736+ 0000000+
1400.053+ .1600472+ .0000000+ .0000000+ 0000000+	.0000000+ .2207537+ 137.0499+ .0000000+ 0000000+	.3000000+ .1183190- .0000008+ .1600472+ 20.0	.002153 .7250036+ 0000000+ .0000000+ 1.000	1998.6 .0001140+ .001596+ .739273-
1401.053+ .2276228+ .0000000+ .0000000+ 0000000+	2.500000+ .2486651+ 137.1765+ .0000000+ 0000000+	.3000000+ .0723402- .0000008+ .2276228+ 20.0	.002151 .9153787+ 0000000+ .0000000+ 1.000	1998.6 .0001141+ .001556+ .3178077-
1402.053+ .2408009+ .0000000+ .0000000+ 0000000+	2.500000+ .2444450+ 193.9028+ .0000000+ 0000000+	.3000000+ .0809062- .0000005+ .2408009+ 40.0	.002128 .9850923+ 0000000+ .0000000+ 1.000	1998.6 .0001146+ .0021359+ .3359879-

G.E.M.
FORCE

1403.053+	.0000000+	.3000000+	.002117	1998.6
.1401677+	.2175219+	.1149783-	.6443843+	.0001149+
.0000000+	194.4338+	.0000005+	0000000+	.0021242+
.0000000+	.0000000+	.1401677+	.0000000+	.8202912-
0000000+	0000000+	40.0	1.000	

1404.053+	2.500000-	.3000000+	.002110	1998.6
.0029851+	.2136757+	.1364626-	.0420502+	.0001151+
.0000000+	194.7270+	.0000005+	0000000+	.0021165+
.0000000+	.0000000+	.0069851+	.0000000+	15.18764-
0000000+	0000000+	40.0	1.000	

1405.053+	2.500000-	.3000000+	.002138	1998.6
.3627738+	.2571231+	.0113754-	1.410895+	139.4513+
.2210048+	97.26137+	1.433772+	1.641474+	.0020789+
10.77063+	3.122497+	.2971100+	.1810024+	.0313595-
4.524767+	1.641474+	10.0	1.010	

1409.053+	.0000000+	.3000000+	.002138	1998.6
.4623588+	.2841867+	.0346043+	1.626942+	139.5753+
.2208944+	97.26137+	1.435054+	2.093112+	.0020759+
10.77103+	3.122497+	.3767049+	.1809284+	.0748430+
4.527045+	2.093112+	10.0	1.010	

1410.053+	2.500000+	.3000000+	.002138	1998.6
.5334909+	.3197123+	.0801767+	1.668650+	139.6972+
.2210906+	97.26137+	1.436378+	2.412995+	.0020722+
10.79016+	3.123710+	.4368970+	.1810600+	.1502870+
4.523030+	2.412995+	10.0	1.010	

1411.053+	2.500000+	.3000000+	.002117	1998.6
.4481324+	.3011047+	.0190411+	1.448273+	139.8230+
.1177121+	138.1852+	1.011852+	3.807012+	.0020676+
11.50395+	3.322222+	.4009372+	.1053152+	.0424900+
8.495297+	3.807012+	20.0	1.010	

1412.053+	.0000000+	.3000000+	.002117	1998.6
.3698870+	.2664269+	.0064816-	1.348374+	132.9473+
.1117723+	138.1852+	.9621101+	3.309051+	.0020635+
11.51333+	3.152560+	.336982+	.1005409+	.0175232-
8.946194+	3.309051+	20.0	1.009	

1413.053+	2.500000-	.3000000+	.002117	1998.6
.2703020+	.2376697+	.0533346-	1.137301+	132.9473+
.1149930+	138.1852+	.9621101+	2.350576+	.0020635+
11.84443+	3.249415+	.2424247+	.1031341+	.1973150-
8.696109+	2.350576+	20.0	1.009	

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1414.053+	2.500000-	.3000000+	002095	1998.6
.120443+	.232479+	.0657220-	.8193606+	132.7493+
.0636876+	195.4811+	.6801136+	2.84724+	.003613+
13.6476+	3.74070+	.175420+	.066942+	.4491287-
14.25043+	2.247524+	40.0	1.009	

1415.053+	.0000000+	.3000000+	.002088	1998.6
.2911175+	.2457271+	.0485722-	1.184718+	140.0703+
.0689146+	195.8324+	.7152559+	4.224323+	.0020584+
13.36740+	3.854102+	.273487+	.0544715+	.1668475-
14.51071+	4.24323+	40.0	1.010	

1416.053+	2.500000+	.3000000+	.002083	1998.6
.368389+	.2730776+	.0234521-	1.349028+	140.0703+
.0661144+	196.007+	.7146158+	5.571995+	.0020584+
12.82425+	3.697508+	.3455440+	.0650144+	.0637613-
15.12422+	5.57199+	40.0	1.010	

1417.053+	2.500000+	.3000000+	.002077	1998.6
.5157453+	.347359+	.0344022+	1.504789+	300.2483+
.2617651+	196.3581+	1.529085+	1.970260+	.0020831+
23.40614+	14.63943+	.4087491+	.0074594+	.0667039+
3.820218+	1.970260+	40.0	1.048	

1418.053+	.0000000+	.3000000+	.002074	1998.6
.4294883+	.3115322+	.0215613+	1.378600+	300.5125+
.2619954+	196.5330+	1.529062+	1.539296+	.0020772+
23.47191+	14.65231+	.3403247+	.2076011+	.0502024+
3.816060+	1.639236+	40.0	1.048	

1419.053+	2.500000-	.3000000+	.002070	1998.6
.3324491+	.2867520+	.0080400-	1.159357+	300.7764+
.2655660+	196.7072+	1.529051+	1.251851+	.0020743+
23.80430+	14.85200+	.2626880+	.2096397+	.0241443-
3.765542+	1.251851+	40.0	1.048	

1420.053+	2.500000-	.3000000+	.002082	1998.6
.4161229+	.2841887+	.0558723+	1.464448+	301.0401+
.5171271+	139.4283+	2.159102+	.046820+	.0020714+
23.43302+	14.61260+	.2742835+	.3408594+	.1342688+
1.933760+	.5046820+	20.0	1.048	

1421.053+	.0000000+	.3000000+	.002089	1998.6
.5051832+	.3264442+	.0958646+	1.547533+	301.3036+
.5066925+	140.6214+	2.142657+	.9970213+	.0020678+
23.45905+	14.61603+	.3352228+	.3362945+	.1897621+
1.973523+	.9970213+	20.0	1.048	

G.E.M.
FORCE

142.053+	2.500000+	.3000000+	.002093	1998.6
.6010664+	.4076755+	.1549306+	1.474374+	301.3036+
.5145994+	139.0544+	2.166804+	1.168027+	.0020685+
23.33076+	14.54117+	.3968484+	.3397594+	.2577595+
1.943258+	1.168027+	20.0	1.048	
1423.053+	2.500000+	.3000000+	.002096	1998.6
.7113212+	.4821059+	.3152746+	1.475445+	301.3036+
1.022576+	98.23279+	3.067241+	.6956170+	.0020682+
23.17255+	14.44760+	.3516907+	.5055810+	.4432239+
.9779223+	.6956170+	10.0	1.048	
1424.053+	.0000000+	.3000000+	.002100	1998.6
.5832834+	.3890679+	.2699276+	1.499181+	301.3036+
1.025225+	98.14441+	3.070003+	.5689320+	.0020685+
23.24068+	14.48503+	.2880091+	.5062277+	.4627727+
.9753954+	.5689320+	10.0	1.048	
1425.053+	2.500000-	.3000000+	.002105	1998.6
.4481324+	.3214039+	.1850049+	1.394296+	301.3036+
1.025225+	98.05595+	3.072772+	.4371063+	.0020678+
23.24879+	14.48503+	.2212753+	.5062277+	.418355+
.9753954+	.4371063+	10.0	1.048	
1429.053+	2.500000+	.2500000+	.002126	1995.8
.2133963+	.2638895+	.0975361-	.8086578+	.0001146+
.0000000+	97.50871+	.0000011+	.0000000+	.0021291+
.0000000+	.0000000+	.2133963+	.0000000+	.4570654-
.0000000+	.0000000+	10.0	1.000	
1430.053+	.0000000+	.2500000+	.002126	1995.8
.0711321+	.2385155+	.1519893-	.2982284+	.0001146+
.0000000+	97.50871+	.0000011+	.0000000+	.0021291+
.0000000+	.0000000+	.0711321+	.0000000+	2.136718-
.0000000+	.0000000+	10.0	1.000	
1431.053+	2.500000-	.2500000+	.002124	1995.8
.0142264-	.2215995+	.1969219-	.0641987-	.0001147+
.0000000+	97.59780+	.0000011+	.0000000+	.0021252+
.0000000+	.0000000+	.0142264-	.0000000+	13.84198+
.0000000+	.0000000+	10.0	1.000	
1432.053+	2.500000-	.2500000+	.002119	1995.8
.0000000+	.2080667+	.1358123-	.0000000+	.0001148+
.0000000+	138.1500+	.0000000+	.0000000+	.0021213+
.0000000+	.0000000+	.0000000+	.0000000+	.0000000+
.0000000+	.0000000+	20.0	1.000	

G.E.M.
FORCE

1433.053+	.0000000+	.2500000+	.002114	1995.8
.1315944+	.2292117+	.1537689-	.574117+	.0001149+
.0000000+	138.2757+	.0000008+	0000000+	.0021175+
.0000000+	.0000000+	.1315944+	.0000000+	1.168506-
0000000+	0000000+	20.0	1.000	

1434.053+	2.500000+	.2500000+	.002112	1995.8
.2169529+	.2545857+	.1066650-	.8521803+	.0001150+
.0000000+	138.4087+	.0000008+	0000000+	.0021136+
.0000000+	.0000000+	.2169529+	.0000000+	.4916505-
0000000+	0000000+	20.0	.000	

1435.053+	2.500000+	.2500000+	.002092	1995.8
.2318158+	.2482912+	.1022840-	.9336449+	.0001155+
.0000000+	195.6301+	.0000005+	0000000+	.0020946+
.0000000+	.0000000+	.2318158+	.0000000+	.4412296-
0000000+	0000000+	40.0	.000	

1436.053+	.0000000+	.2500000+	.002078	1995.8
.1347766+	.2222228+	.0119299-	.6064934+	.0001160+
.0000000+	196.3325+	.0000005+	0000000+	.0020797+
.0000000+	.0000000+	.1347766+	.0000000+	.0885166-
0000000+	0000000+	40.0	1.000	

1437.053+	2.500000-	.2500000+	.002072	1995.8
.0000000+	.2192313+	.1591721-	.0000000+	.0001162+
.0000000+	196.6828+	.0000005+	0000000+	.0020723+
.0000000+	.0000000+	.0000000+	.0000000+	0000000+
0000000+	0000000+	40.0	1.000	

1441.053+	2.500000-	.2500000+	.002097	1995.8
.4267927+	.2554315+	.0236692+	1.670869+	139.9467+
.2205595+	98.71916+	1.424841+	1.935045+	.0020620+
10.79855+	3.116205+	.3496697+	.1807036+	.0554583+
4.533923+	1.935045+	10.0	1.010	

1442.053+	.0000000+	.2500000+	.002097	1995.8
.5334909+	.2943383+	.0451919+	1.812509+	140.1937+
.2203325+	98.21916+	1.427356+	2.421299+	.0020547+
10.80648+	3.112998+	.4371685+	.1805512+	.0847097+
4.538594+	2.421299+	10.0	1.010	

1443.053+	2.500000+	.2500000+	.002097	1995.8
.5832834+	.3366283+	.0939612+	1.73272 +	140.3171+
.2208348+	98.71916+	1.428612+	2.641265+	.0020511+
10.84065+	3.110095+	.4777742+	.1808883+	.1610901+
4.528271+	2.641 65+	10.0	1.010	

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1444.053+	2.500000+	.2500000+	.002096	1995.8
.4836984+	.319459+	.0431546+	1.545629+	133.4183+
.108145+	138.9102+	.9604643+	4.469808+	.0020468+
11.19734+	3.057849+	.4364664+	.0976476+	.0892180+
9.240898+	4.469808+	20.0	1.009	

1445.053+	.0000000+	.2500000+	.002092	1995.8
.3947833+	.2740391+	1.02000-	1.440609+	140.4403+
.1210101+	139.0353+	1.00000+	3.262397+	.0020468+
11.89528+	3.419417+	.3521674+	.1079474+	.0278025-
8.263767+	3.262397+	20.0	1.010	

1446.053+	2.500000-	.2500000+	.002092	1995.8
.2916417+	.2469735+	.0394847-	1.180862+	133.4183+
.1149596+	139.0353+	.9596002+	2.536904+	.0020461+
11.89949+	3.248446+	.2615715+	.1031065+	.1353877-
8.698702+	2.536904+	20.0	1.009	

1447.053+	2.500000-	.2500000+	.002067	1995.8
.2066575+	.239744+	.0782647-	.8619918+	133.3012+
.0668426+	196.847+	.6771811+	3.091702+	.0020475+
13.69615+	3.738231+	.1937094+	.0676546+	.3787170-
14.96051+	3.09170+	40.0	1.009	

1448.053+	.0000000+	.2500000+	.002063	1995.8
.3162759+	.2585476+	.0371907-	1.223278+	140.3171+
.0688802+	197.0220+	.7121900+	4.591680+	.0020489+
13.39848+	3.852184+	.2958946+	.0644414+	.1175894-
14.51795+	4.591680+	40.0	1.010	

1449.053+	2.500000+	.2500000+	.002058	1995.8
.4097210+	.2833340+	.0242371-	1.446070+	140.3171+
.0689581+	197.1966+	.7115595+	5.941591+	.0020489+
13.41364+	3.856542+	.3832900+	.0645096+	.0591551-
14.50155+	5.941591+	40.0	1.010	

1453.053+	2.500000+	.2500000+	.002224	2017.0
.8606987+	.4228999+	.0283594+	2.035230+	297.8125+
1.046731+	95.38020+	3.12237+	.8222726+	.001874+
22.70137+	14.78888+	.4205235+	.5114161+	.037949+
.9553548+	.8222726+	10.0	1.048	

1454.053+	.0000000+	.2500000+	.002219	2017.0
.7184344+	.3417031+	.0110764-	2.102510+	298.0851+
1.047689+	95.47031+	3.122280+	.6057321+	.0021834+
22.74295+	14.80242+	.3508512+	.5116447+	.0154175-
.9544811+	.6057321+	10.0	1.048	

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1455.053+	2.500000-	.2500000+	.002215	2017.0
.6117362+	.2605063+	.0544056-	2.348258+	298.3574+
1.044056+	95.56033+	3.122189+	.5859227+	.0021787+
22.69263+	14.75189+	.2992756+	.5107766+	.0889365-
.9578028+	.5859227+	10.0	1.048	
1456.053+	2.500000-	.2500000+	.002190	2017.0
.5085947+	.2672727+	.0676593-	1.902905+	298.6295+
.5277554+	135.9112+	2.197239+	.9636938+	.0021747+
22.96252+	14.91293+	.3329032+	.3454449+	.1330318-
1.894816+	.9636938+	20.0	1.048	
1457.053+	.0000000+	.2500000+	.002188	2017.0
.5548305+	.3247871+	.0176586-	1.708289+	298.6295+
.5244734+	136.0377+	2.195196+	1.057481+	.0021747+
22.81972+	14.82018+	.3639490+	.3440357+	.0318270-
1.906674+	1.057881+	20.0	1.048	
1458.053+	2.500000+	.2500000+	.002188	2017.0
.6721966+	.3865305+	.0486370+	1.739056+	298.9014+
.5223228+	136.0377+	2.197194+	1.286940+	.0021708+
22.74683+	14.75941+	.4415611+	.3431091+	.0723551+
1.914524+	1.286940+	20.0	1.048	
1459.053+	2.500000+	.2500000+	.002164	2017.0
.5597724+	.3427359+	.0004053-	1.633246+	298.9014+
.2650723+	192.4561+	1.553088+	2.111772+	.0021708+
22.84698+	14.82439+	.4424825+	.2095313+	.0007242-
3.772555+	2.111772+	40.0	1.048	
1460.053+	.0000000+	.2500000+	.002153	2017.0
.4402704+	.3055563+	.0178930-	1.440881+	299.1730+
.2661438+	192.8095+	1.551650+	1.654257+	.0021661+
22.96812+	14.88432+	.3477254+	.2102003+	.0406409-
3.757366+	1.654257+	40.0	1.048	
1461.053+	2.500000-	.2500000+	.002146	2017.0
.3773746+	.2824793+	.0561047-	1.335937+	299.1730+
.2699649+	193.1623+	1.548816+	1.397865+	.0021653+
23.30593+	15.09801+	.2971536+	.2125766+	.1486711-
3.704185+	1.397865+	40.0	1.048	
1462.053+	5.000000+	.1500000+	.002195	2017.0
.3300945+	.3264787+	.0763642+	.9804452+	.0001134+
.0000000+	96.01424+	.0000011+	0000000+	.0021959+
.0000000+	.0000000+	.3200945+	.0000000+	.2385676+
0000000+	0000000+	10.0	1.000	

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1463.053+	2.500000+	.1500000+	.002195	2017.0
.2276278+	.2757307+	.0036317-	.8255255+	.0001134+
.0000000+	96.01424+	.0000011+	0000000+	.0021959+
.0000000+	.0000000+	.2276228+	.0000000+	.0159552-
0000000+	0000000+	10.0	1.000	

1464.053+	.0000000+	.1500000+	.002195	2017.0
.0355660+	.2486651+	.0552586-	.1430279+	.0001134+
.0000000+	96.01424+	.0000011+	0000000+	.0021959+
.0000000+	.0000000+	.0355660+	.0000000+	1.553691-
0000000+	0000000+	10.0	1.000	

1465.053+	2.500000-	.1500000+	.002195	2017.0
.1351510-	.2452819+	.0812417-	.5510027-	.0001134+
.0000000+	96.01424+	.0000011+	0000000+	.0021959+
.0000000+	.0000000+	.1351510-	.0000000+	.6011145+
0000000+	0000000+	10.0	1.000	

1466.053+	5.000000-	.1500000+	.002190	2017.0
.1991699-	.2503567+	.1145424-	.7955444-	.0001135+
.0000000+	96.10376+	.0000011+	0000000+	.0021918+
.0000000+	.0000000+	.1991699-	.0000000+	.5750987+
0000000+	0000000+	10.0	1.000	

1467.053+	5.000000-	.1500000+	.002187	2017.0
.1529340-	.2309033+	.1436512-	.6623293-	.0001137+
.0000000+	136.0520+	.0000008+	0000000+	.0021877+
.0000000+	.0000000+	.1529340-	.0000000+	.9393019+
0000000+	0000000+	20.0	1.000	

1468.053+	2.500000-	.1500000+	.002178	2017.0
.0924717-	.2224453+	.1252839-	.4157054-	.0001139+
.0000000+	136.3047+	.0000008+	0000000+	.0021796+
.0000000+	.0000000+	.0924717-	.0000000+	1.354834+
0000000+	0000000+	20.0	1.000	

1469.053+	.0000000+	.1500000+	.002178	2017.0
.0853585+	.2317491+	.0742501-	.3623130+	.0001139+
.0000000+	136.3047+	.0000008+	0000000+	.0021796+
.0000000+	.0000000+	.0853585+	.0000000+	.8698614-
0000000+	0000000+	20.0	1.000	

1470.053+	2.500000+	.1500000+	.002178	2017.0
.2631888+	.2638895+	.0289615-	.9973447+	.0001139+
.0000000+	136.3047+	.0000008+	0000000+	.0021796+
.0000000+	.0000000+	.2631888+	.0000000+	.1100409-
0000000+	0000000+	20.0	1.000	

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1471.053+	5.000000+	.1500000+	.002173	2017.0
.3414342+	.3197123+	.0578366+	1.067941+	.0001140+
.0000000+	136.4308+	.0000008+	0000000+	.0021756+
.0000000+	.0000000+	.3414342+	.0000000+	.1693932+
0000000+	0000000+	20.0	1.000	

1471.053+	5.000000+	.1500000+	.002148	2017.0
.3719835+	.3145307+	.0201034+	1.122662+	.0000114+
.0000000+	193.0165+	.0000000+	0000000+	.0021517+
.0000000+	.0000000+	.3719835+	.0000000+	.0540440+
0000000+	0000000+	40.0	1.000	

1473.053+	2.500000+	.1500000+	.002141	2017.0
.2605682+	.2611117+	.0554429-	.9977181+	.0001112+
.0000000+	193.3690+	.0000005+	0000000+	.0021432+
.0000000+	.0000000+	.2605682+	.0000000+	.2127770-
0000000+	0000000+	40.0	1.000	

1474.053+	.0000000+	.1500000+	.002135	2017.0
.0970391+	.2311971+	.0963449-	.4197248+	.0001150+
.0000000+	193.7209+	.0000005+	0000000+	.0021361+
.0000000+	.0000000+	.0970391+	.0000000+	.99 8455-
0000000+	0000000+	40.0	1.000	

1475.053+	2.500000-	.1500000+	.002130	2017.0
.0826630-	.2311971+	.1331082-	.3575433-	.0011517+
.0000000+	193.8966+	.0000005+	0000000+	.0021322+
.0000000+	.0000000+	.0826630-	.0000000+	1.610258+
0000000+	0000000+	40.0	1.000	

1476.053+	5.000000-	.1500000+	.002123	2017.0
.1383707-	.2457 71+	.1451909-	.5631071-	.0001153+
.0000000+	194.2476+	.0000005+	0000000+	.0021245+
.0000000+	.0000000+	.1383707-	.0000000+	1.049 89+
0000000+	0000000+	40.0	1.000	

1482.053+	5.000000-	.1500000+	.002178	2022.6
.4410191+	.2554315+	.0681192-	1.726564+	131.5 324+
.2177067+	96.41499+	1.364232+	2.025718+	.0021342+
10.95692+	3.075899+	.36 1712+	.1767842+	.1544603-
4.593334+	2.025748+	10.0	1.009	

1483.053+	2.500000-	.1500000+	.002178	2022.6
.5121513+	.2791139+	.0286533-	1.831912+	138.7019+
.2234805+	96.41499+	1.438624+	2.291703+	.0021273+
10.70070+	3.157475+	.4186019+	.1826596+	.0559471-
4.474661+	2.291703+	10.0	1.010	

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1484.053+	.0000000+	.1500000+	.002178	2022.6
.6330759+	.307963+	.0018754	2.090764+	138.7049+
.2234805+	96.41499+	1.43862+	2.832800+	.0021265+
10.70443+	3.157475+	.5174384+	.1826596+	.1340586-
4.474661+	2.832800+	10.0	1.010	
1485.053+	2.500000+	.1500000+	.002173	2022.6
.7255477+	.3332451+	.0197010+	2.17712+	138.9541+
.2247984+	96.50389+	1.439881+	3.227547+	.0021944+
10.41607+	3.170095+	.593811+	.1835391+	.0271533+
4.448429+	3.227547+	10.0	1.010	
1486.053+	5.000000+	.1500000+	.002171	2022.6
.8251326+	.3992175+	.1207853+	2.066874+	138.9541+
.2073887+	96.54272+	1.438557+	3.978675+	.0021204+
9.944568+	2.930121+	.6834026+	.1717663+	.1163829+
4.621861+	3.978675+	10.0	1.010	
1487.053+	5.000000+	.1500000+	.002158	2022.6
.7077646+	.3856847+	.0859104+	1.835085+	132.0064+
.0986547+	136.8607+	.9645310+	7.174156+	.0021204+
9.959214+	2.787714+	.6442102+	.0897959+	.1213954+
10.13635+	7.174156+	20.0	1.009	
1488.053+	2.500000+	.1500000+	.002154	2022.6
.5690570+	.3281703+	.0127518+	1.734029+	132.1247+
.1030994+	136.9860+	.9645120+	5.519497+	.0021151+
10.42449+	2.913308+	.5158710+	.0934634+	.0224087+
9.699374+	5.519497+	20.0	1.009	
1489.053+	.0000000+	.1500000+	.002152	2022.6
.4765852+	.2960299+	.0381004	1.6099224	139.0786+
.1192254+	137.1112+	1.018599+	3.997345+	.0021159+
11.44827+	3.368985+	.4258170+	.1065249+	.1531309-
8.387471+	3.997345+	20.0	1.010	
1490.053+	2.500000-	.1500000+	.002147	2022.6
.3592172+	.26698101+	.0596355-	1.331370+	132.1247+
.1132641+	137.2362+	.9627536+	3.171499+	.0021144+
11.45626+	3.200536+	.326702+	.1017406+	.1660151-
8.626917+	3.171499+	20.0	1.009	
1491.053+	5.000000-	.1500000+	.002147	2022.6
.2454058+	.2537399+	.0957611-	.9671548+	138.9541+
.1252274+	137.2362+	1.012518+	1.359681+	.0021182+
12.02222+	3.538505+	.2180944+	.1112907+	.3902156-
7.98547+	1.959681+	20.0	1.010	

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1492.053+	5.000000-	.1500000+	.002131	2022.6
.1689200+	.2529921+	.1151065-	.6676891+	138.9541+
.0740754+	193.9260+	.7165319+	2.280378+	.0021160+
14.08955+	4.142733+	.1572702+	.0689667+	.6814261-
13.49974+	2.280378+	40.0	1.010	

1493.053+	2.500000-	.1500000+	.002122	2022.6
.2659592+	.2585476+	.0943148-	1.028666+	138.9541+
.0709889+	194.2763+	.7152397+	3.746486+	.0021160+
13.50248+	3.970119+	.2483305+	.0662835+	.3546212-
14.08669+	3.746486+	40.0	1.010	

1494.053+	.0000000+	.1500000+	.002115	2022.6
.3917508+	.2735049+	.0483300-	1.432335+	139.0786+
.0671910+	194.6261+	.7152397+	5.830404+	.0021129+
12.78707+	3.757714+	.3670659+	.0679606+	.1347526-
14.88294+	5.830404+	40.0	1.010	

1495.053+	2.500000+	.1500000+	.002106	2022.6
.5031662+	.3115392+	.0128403-	1.615097+	139.0786+
.0617848+	194.9752+	.7133144+	8.143845+	.0021144+
11.75001+	3.455370+	.4738871+	.0581396+	.0255191-
16.18519+	8.143845+	40.0	1.010	

1496.053+	5.000000+	.1500000+	.002103	2022.6
.6631011+	.3683770+	.0352557+	1.800061+	145.0031+
.0611959+	195.1495+	.7430359+	10.83571+	.0021121+
11.17467+	3.422433+	.6248621+	.0576669+	.0531679+
16.34096+	10.83571+	40.0	1.011	

1502.053+	5.000000+	.1500000+	.002171	2022.6
1.045642+	.4076755+	.1413060+	2.564888+	301.6064+
1.054099+	96.58765+	3.122619+	.9919767+	.0021401+
23.07268+	14.89299+	.5090513+	.5131686+	.1351380+
.9486769+	.9919767+	10.0	1.049	

1503.053+	2.500000+	.1500000+	.002159	2022.6
1.166566+	.3636939+	.1246628+	3.207550+	301.8756+
1.041769+	96.76504+	3.119676+	1.119793+	.0021363+
22.82314+	14.71878+	.5713509+	.510287+	.1068630+
.9599053+	1.119793+	10.0	1.049	

1504.053+	.0000000+	.1500000+	.002159	2022.6
1.095434+	.2943383+	.0572650+	3.721685+	301.8756+
1.035133+	96.76504+	3.119676+	1.058254+	.0021355+
22.68559+	14.62503+	.5382617+	.5086318+	.0522761+
.9660585+	1.058254+	10.0	1.049	

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1505.053+ .8393591+ 1.035133+ 22.69340+ .9660585+	2.500000- .2621979+ 96.76504+ 14.62503+ .8108700+	.1500000+ .0371864+ 3.119676+ .41 4343+ 10.0	.002159 3.201241+ .8108700+ .5086318+ 1.049	2022.6 301.8756+ .0021348+ .0443034+
1506.053+ 6.380551- 1.034676+ 22.88747+ .9664854+	5.000000- .2029919+ 96.76504+ 14.61857+ 6.166710-	.1500000+ .1184640- 3.098437+ 3.135904- 10.0	.002159 31.43253- 6.166710- .5085214+ 1.048	2022.6 299.8203+ .0021303+ .0185664+
1507.053+ .5370475+ .5206335+ 23.04119+ 1.920736+	5.000000- .2605063+ 137.2290+ 14.71168+ 1.031527+	.1500000+ .0313371- 2.184816+ .3531735+ 20.0	.002148 2.061552+ 1.031527+ .34 3793+ 1.048	2022.6 299.8203+ .0021295+ .0583507-
1508.053+ .6295193+ .5279901+ 23.17104+ 1.893974+	2.500000- .2858803+ 137.3539+ 14.91956+ 1.192293+	.1500000+ 2.218031- 2.199750+ .4119917+ 20.0	.002143 2.202037+ 1.192293+ .3455455+ 1.049	2022.6 302.1445+ .0021310+ 3.523373-
1509.053+ .7611137+ .5213487+ 22.87170+ 1.918101+	.0000000+ .3315535+ 137.4788+ 14.73189+ 1.459893+	.1500000+ .0346463+ 2.197753+ .5002888+ 20.0	.002141 2.295598+ 1.459893+ .34 6885+ 1.049	2022.6 302.1445+ .0021317+ .0455206+
1510.053+ .8998214+ .5147073+ 22.58034+ 1.942851+	2.500000+ .3873763+ 137.6035+ 14.5442 + 1.748219+	.1500000+ .0850407+ 2.195762+ .5940562+ 20.0	.002141 2.322860+ 1.748219+ .3398064+ 1.049	2022.6 302.1445+ .0021317+ .0945084+
1511.053+ 1.052755+ .5147073+ 22.57257+ 1.942851+	5.000000+ .4558861+ 137.4788+ 14.5442+ 2.045347+	.1500000+ .1334114+ 2.197753+ .6950223+ 20.0	.002141 2.309250+ 2.045347+ .3398064+ 1.049	2022.6 302.1445+ .0021325+ .126759+
1512.053+ .8481944+ .2586146+ 22.45911+ 3.866757+	5.000000+ .4106848+ 194.1302+ 14.46324+ 3.279762+	.1500000+ .0894828+ 1.557785+ .6739111+ 40.0	.002124 2.065317+ 3.279762+ .2054756+ 1.049	2022.6 302.4132+ .0021294+ .1054979+

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1513.053+	2.500000+	.1500000+	.002113	2022.6
.7349820+	.3606847+	.0400192+	2.037741+	302.4137+
.2586146+	194.6542+	1.553592+	2.841997+	.0021272+
22.48233+	14.46324+	.5839611+	.2054756+	.0544493+
3.866757+	2.841997+	40.0	1.049	
1514.053+	.0000000+	.1500000+	.002108	2022.6
.6163786+	.3235051+	.0022650+	1.905313+	300.0870+
.2599580+	194.8285+	1.540262+	2.371069+	.0021265+
22.78216+	14.53837+	.4892056+	.2063227+	.0150314+
3.846774+	2.371069+	40.0	1.048	
1515.053+	2.500000-	.1500000+	.002106	2022.6
.5013691+	.309922+	.0239116-	1.654726+	300.0870+
.2632908+	195.0027+	1.538886+	1.904240+	.0021258+
23.08219+	14.72476+	.3968754+	.2084166+	.0476926-
3.798080+	1.904240+	40.0	1.048	
1516.053+	5.000000-	.1500000+	.002102	2022.6
.4151121+	.2782058+	.0555785-	1.492104+	302.4132+
.2720491+	195.1767+	1.549437+	1.525871+	.0021258+
23.66655+	15.21458+	.3263333+	.2138668+	.1338880-
3.675806+	1.525871+	40.0	1.049	
1517.053+	5.000000+	.1000000+	.002263	2036.1
.4979248+	.3400115+	.1120579+	1.464435+	.0001123+
.0000000+	94.57723+	.0000011+	.0000000+	.0022631+
.0000000+	.0000000+	.4979248+	.0000000+	.2250498+
.0000000+	.0000000+	10.0	1.000	
1518.053+	2.500000+	.1000000+	.002256	2036.1
.2703020+	.2824971+	.0398632+	.9568311+	.0001124+
.0000000+	94.66726+	.0000011+	.0000000+	.0022588+
.0000000+	.0000000+	.2703020+	.0000000+	.1474766+
.0000000+	.0000000+	10.0	1.000	
1519.053+	.0000000+	.1000000+	.002254	2036.1
.0569057+	.2503567+	.0321933-	.2272984+	.0001125+
.0000000+	94.75721+	.0000011+	.0000000+	.0022545+
.0000000+	.0000000+	.0569057+	.0000000+	.5657316-
.0000000+	.0000000+	10.0	1.000	
1520.053+	2.500000-	.1000000+	.002254	2036.1
.1707171-	.2554315+	.0633540-	.6683476-	.0001125+
.0000000+	94.75721+	.0000011+	.0000000+	.0022545+
.0000000+	.0000000+	.1707171-	.0000000+	.3711053+
.0000000+	.0000000+	10.0	1.000	

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1521.053+ .0640189- .0000000+ .0000000+ 0000000+	5.000000- .2317491+ 94.84707+ .0000000+ 0000000+	.1000000+ .1179068- .0000011+ .0640189- 10.0	.002249 .276242- 0000000+ .0000000+ 1.000	2036.1 .0001126+ .0022503+ 1.841750+
1522.053+ .1422642- .0000000+ .0000000+ 0000000+	5.000000- .2368239+ 134.4018+ .0000000+ 0000000+	.1000000+ .1295018- .0000000+ .1422642- 20.0	.002239 .600717- 0000000+ .0000000+ 1.000	2036.1 .0000112+ .0022418+ .9102906+
1523.053+ .1387076- .0000000+ .0000000+ 0000000+	2.500000- .2317491+ 134.6551+ .0000000+ 0000000+	.1000000+ .1101689- .0000008+ .1387076- 20.0	.002230 .5985248- 0000000+ .0000000+ 1.000	2036.1 .0001130+ .0022333+ .7942530+
1524.053+ .0995849+ .0000000+ .0000000+ 0000000+	.0000000+ .2359781+ 134.6551+ .0000000+ 0000000+	.1000000+ .0631143- .0000008+ .0995849+ 20.0	.002230 .427009+ 0000000+ .0000000+ 1.000	2036.1 .0001130+ .0022333+ .6337735-
1525.053+ .2845285+ .0000000+ .0000000+ 0000000+	2.500000+ .2740391+ 134.7816+ .0000000+ 0000000+	.1000000+ .0050353+ .0000008+ .2845285+ 20.0	.002228 1.038276+ 0000000+ .0000000+ 1.000	2036.1 .0001131+ .0022291+ .0176972+
1526.053+ .5121513+ .0000000+ .0000000+ 0000000+	5.000000+ .3340909+ 134.7816+ .0000000+ 0000000+	.1000000+ .0872988+ .0000008+ .5121513+ 20.0	.002228 1.532969+ 0000000+ .0000000+ 1.000	2036.1 .0001131+ .0022291+ .1704551+
1527.053+ .5103542+ .0000000+ .0000000+ 0000000+	5.000000+ .3333342+ 190.8747+ .0000000+ 0000000+	.1000000+ .0516119+ .0000005+ .5103542+ 40.0	.002202 1.531058+ 0000000+ .0000000+ 1.000	2036.1 .0001132+ .0022043+ .1011296+
1528.053+ .3036967+ .0000000+ .0000000+ 0000000+	2.500000+ .2722229+ 191.0622+ .0000000+ 0000000+	.1000000+ .0247785- .0000005+ .3036967+ 40.0	.002193 1.115617+ 0000000+ .0000000+ 1.000	2036.1 .0001140+ .0021962+ .0815896-

G.E.M.
FORCE

1529.053+	.0000000+	.1000000+	.002186	2036.1
.0952421+	.2354707+	.0786739-	.4044756+	.0001142+
.0000000+	191.4151+	.0000005+	0000000+	.0021881+
.0000000+	.0000000+	.0952421+	.0000000+	.8260405-
0000000+	0000000+	40.0	1.000	
1530.053+	2.500000-	.1000000+	.002184	2036.1
.1365736-	.2393168+	.1174877-	.5706814-	.0001143+
.0000000+	191.5913+	.0000005+	0000000+	.0021841+
.0000000+	.0000000+	.1365736-	.0000000+	.8602514+
0000000+	0000000+	40.0	1.000	
1531.053+	5.000000-	.1000000+	.002184	2036.1
.1904843-	.2581203+	.1350876-	.7379672-	.0001142+
.0000000+	191.5913+	.0000005+	0000000+	.0021881+
.0000000+	.0000000+	.1904843-	.0000000+	.7091797+
0000000+	0000000+	40.0	1.000	
1537.053+	5.000000-	.1000000+	.002233	2037.5
.6117364+	.2554315+	.0000800-	2.394912+	131.1758+
.2142331+	95.17261+	1.378294+	2.855470+	.0021623+
10.67095+	3.07682+	.5038046+	.1764349+	.0001308-
4.667812+	2.855470+	10.0	1.009	
1538.053+	2.500000-	.1000000+	.002231	2037.5
.6899816+	.2740391+	.0324869+	2.517821+	138.2051+
.2172070+	95.6201+	1.450789+	3.176607+	.0021591+
10.22389+	3.068840+	.5668564+	.1784471+	.0470837+
4.603901+	3.176607+	10.0	1.010	
1539.053+	.0000000+	.1000000+	.002224	2037.5
.8251326+	.3044879+	.0763189+	2.709902+	138.3302+
.2170996+	95.35133+	1.450742+	3.800708+	.0021560+
10.28455+	3.067322+	.6779499+	.1783746+	.0924929+
4.606178+	3.800708+	10.0	1.010	
1540.053+	2.500000+	.1000000+	.002224	2037.5
.8891515+	.3518527+	.1147592+	2.527055+	138.4552+
.2011660+	95.35133+	1.452053+	4.419987+	.0021514+
9.541654+	2.842202+	.7402403+	.1674756+	.1290660+
4.971016+	4.419987+	10.0	1.010	
1541.053+	5.000000+	.1000000+	.002219	2037.5
.9887365+	.3839931+	.1852577+	2.574880+	138.5801+
.2013475+	95.44057+	1.452004+	4.910596+	.002148+
9.555560+	2.844766+	.8230229+	.1676014+	.1873681+
4.966535+	4.910596+	10.0	1.010	

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1542.053+	5.000000+	.1000000+	.002211	2037.5
.8678119+	.4034465+	.1410710+	2.150996+	131.6511+
.0875374+	135.2324+	.9735174+	9.913607+	.002148+
8.746020+	2.473569+	.7979605+	.0804914+	.16 5594+
11.4 360+	9.913607+	20.0	1.009	

1543.053+	2.500000+	.1000000+	.002209	2037.5
.7362175+	.3526985+	.0736800+	2.087384+	131.7696+
.0955813+	135.3583+	.9734880+	7.702519+	.0021436+
9.561613+	2.700869+	.6719879+	.0872426+	.1000791+
10.46 20+	7.702519+	20.0	1.009	

1544.053+	.0000000+	.1000000+	.002204	2037.5
.6010664+	.3070253+	.0110471+	1.957709+	131.7696+
.1031120+	135.4240+	.9725846+	5.829755+	.0021429+
10.31852+	2.913665+	.5448825+	.0934737+	.0183793+
9.698187+	5.829255+	20.0	1.009	

1545.053+	2.500000-	.1000000+	.002200	2037.5
.5157072+	.2782681+	.0224705-	1.85376+	138.7049+
.1201246+	135.6096+	1.022224+	4.293107+	.0021429+
11.41994+	3.394394+	.460402 +	.1072421+	.0435722-
8.324687+	4.293107+	20.0	1.010	

1546.053+	5.000000-	.1000000+	.002200	2037.5
.3734436+	.2664269+	.0239536-	1.401673+	131.7696+
.1141183+	135.6096+	.9716836+	3.272423+	.0021421+
11.42389+	3.224674+	.3351920+	.1024293+	.0641426-
8.762829+	3.272423+	20.0	1.009	

1547.053+	5.000000+	.1000000+	.002170	2037.5
.8032689+	.3970095+	.0663244+	2.023798+	130.9375+
.044280+	192.0421+	.6818170+	18.14044+	.0021717+
8.708668+	2.476428+	.7692079+	.0474029+	.085678+
22.58327+	18.14044+	40.0	1.009	

1548.053+	2.500000+	.1000000+	.002159	2037.5
.6469279+	.3307700+	.0090031+	1.955823+	131.1758+
.0520824+	192.5680+	.6811923+	12.42122+	.0021616+
10.27237+	2.912756+	.6149023+	.0495041+	.0139167+
19.20032+	12.42122+	40.0	1.009	

1549.053+	.0000000+	.1000000+	.002159	2037.5
.4977751+	.2970093+	.0176604-	1.675957+	138.4552+
.0623536+	192.5680+	.7189934+	7.983097+	.0021491+
11.71910+	3.487180+	.4685587+	.0586938+	.0254339-
16.03754+	7.983097+	40.0	1.010	

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FORCE

1550.530+	2.100000-	.1000000+	.002152	2037.5
.3647955+	.277778+	.0498483-	1.313260+	138.4552+
.0688119+	192.9178+	.7175902+	5.301338+	.0011484+
12.93740+	3.848368+	.3413093+	.0643817+	.136647-
14.53235+	5.301338+	40.0	1.010	
1551.053+	5.000000-	.1000000+	.002149	2037.5
.2461920+	.2662400+	.0740203-	.9246996+	131.6511+
.0666731+	193.0924+	.6818035+	3.692521+	.0011430+
13.1610+	3.728753+	.2308036+	.065057+	.3006609-
14.99854+	3.692521+	40.0	1.009	
1552.053+	5.000000-	.1000000+	.002136	2037.5
.5804331+	.2927358+	.0081994-	1.982805+	209.5535+
.2658169+	193.5953+	1.547317+	2.183600+	.0011495+
23.08706+	14.86604+	.4585482+	.2099963+	.0141263-
3.761986+	2.183600+	40.0	1.048	
1553.053+	2.500000-	.1000000+	.002133	2037.5
.6829684+	.3055563+	.0213450+	2.234836+	301.8756+
.2636867+	193.7693+	1.557911+	2.599695+	.0011510+
22.71035+	14.74690+	.5403779+	.2086646+	.031365+
3.792378+	2.589695+	40.0	1.049	
1554.053+	.0000000+	.1000000+	.002124	2037.5
.8068629+	.3235051+	.0649883+	2.494127+	302.1445+
.2572103+	194.1169+	1.556507+	3.136976+	.0011479+
22.16472+	14.38470+	.6417883+	.2045881+	.0805444+
3.887868+	3.136976+	40.0	1.049	
1555.053+	2.500000+	.1000000+	.002124	2037.5
.9344515+	.3295735+	.0901361+	2.673118+	302.1445+
.2543580+	194.1169+	1.556507+	3.673764+	.0021486+
21.91143+	14.2519+	.7449639+	.2027794+	.0964588+
3.931465+	3.673764+	40.0	1.049	
1556.053+	5.000000+	.1000000+	.002124	2037.5
1.031420+	.3244454+	.1544391+	2.615040+	302.1432+
.2478670+	194.1169+	1.55789+	4.161468+	.0011456+
21.36395+	13.86117+	.8266030+	.1986325+	.149724+
4.034421+	4.161468+	40.0	1.049	
1557.053+	5.000000+	.1000000+	.002146	2037.5
1.273265+	.414441+	.2223743+	3.072232+	302.6817+
.5036466+	137.3491+	2.203739+	2.528092+	.0021417+
21.95290+	14.3168+	.8467847+	.3349501+	.1746489+
1.985518+	2.528092+	20.0	1.049	

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FORCE

1558.053+	2.500000+	.1000000+	.002146	2037.5
1.148783+	.3476237+	.1730753+	3.304675+	302.6817+
.5119631+	137.3491+	2.203739+	2.243880+	.0021410+
22.32302+	14.46668+	.7597962+	.336082+	.1505596+
1.953265+	2.243880+	20.0	1.049	

1559.053+	.0000000+	.1000000+	.002150	2037.5
1.020746+	.3119459+	.1512511+	3.261732+	302.6817+
.5119631+	137.2251+	2.205730+	1.993788+	.0021403+
22.33065+	14.46668+	.6751130+	.336082+	.1481770+
1.953265+	1.953788+	20.0	1.049	

1560.053+	2.500000-	.1000000+	.002150	2037.5
.8891515+	.2884177+	.1017603+	3.002859+	302.6817+
.5169530+	137.0753+	2.208141+	1.719985+	.0021396+
22.55601+	14.60768+	.5861431+	.3407838+	.1144465+
1.934411+	1.719985+	20.0	1.049	

1561.053+	5.000000-	.1000000+	.002150	2037.5
.7575571+	.2478193+	.0768344+	3.056892+	300.3534+
.5208988+	137.2251+	2.188763+	1.454326+	.0021388+
22.91220+	14.71918+	.4980983+	.3424940+	.1014239+
1.919758+	1.454326+	20.0	1.048	

1562.053+	5.000000-	.1000000+	.002153	2037.5
1.20132+	.1353179+	.0424361+	8.883106+	302.6817+
1.039228+	96.94001+	3.122360+	1.156755+	.0021396+
22.67213+	14.68288+	.5895037+	.5096184+	.0353006+
.9622521+	1.156755+	10.0	1.049	

1563.053+	2.500000-	.1000000+	.002157	2037.5
1.443932+	.2013003+	.0929057+	7.173270+	302.9499+
1.024167+	96.85216+	3.127962+	1.409907+	.0021365+
22.35571+	14.47009+	.7133708+	.5059697+	.0643399+
.9764025+	1.409907+	10.0	1.049	

1564.053+	.0000000+	.1000000+	.002157	2037.5
1.600472+	.2672727+	.1246860+	5.928162+	300.6195+
1.009681+	96.85216+	3.103901+	1.585126+	.0021358+
22.21795+	14.16542+	.7963813+	.5024087+	.0779077+
.9904111+	1.585126+	10.0	1.048	

1565.053+	2.500000+	.1000000+	.002157	2037.5
1.579133+	.3636939+	.1434514+	4.341928+	300.6195+
1.009681+	96.85216+	3.103901+	1.563991+	.0021358+
22.21795+	14.26542+	.7857628+	.5024087+	.0908418+
.9904111+	1.563991+	10.0	1.048	

G.E.M.
FORCE

1566.053+	5.000000+	.1000000+	.002160	2037.5
1.465321+	.417503+	.1321474+	3.550140+	300.6195+
1.031487+	96.75424+	3.106721+	1.420590+	.0021372+
22.68227+	14.57351+	.7213048+	.5077498+	.0901632+
.9694736+	1.40590+	10.0	1.048	
1572.053+	2.500000+	.0500000+	.002196	2033.3
.6046230+	.3061795+	.0172300+	1.971733+	.0001139+
.0000000+	95.98553+	.0000011+	0000000+	.0021972+
.0000000+	.0000000+	.6046230+	.0000000+	.0284971+
0000000+	0000000+	10.0	1.000	
1573.053+	.0000000+	.0500000+	.002189	2033.3
.1209246+	.2588147+	.0532367-	.4672245+	.0001141+
.0000000+	96.16311+	.0000011+	0000000+	.0021891+
.0000000+	.0000000+	.1209246+	.0000000+	.4402475-
0000000+	0000000+	10.0	1.000	
1574.053+	2.500000-	.0500000+	.002189	2033.3
.0924717-	.2537399+	.0894332-	.3044331-	.0001141+
.0000000+	96.16312+	.0000011+	0000000+	.0021891+
.0000000+	.0000000+	.0924717-	.0000000+	.9671735+
0000000+	0000000+	10.0	1.000	
1575.053+	2.500000-	.0500000+	.002174	2033.3
.0604623-	.2418987+	.1082444-	.2499487-	.0001144+
.0000000+	136.3852+	.0000000+	0000000+	.0021770+
.0000000+	.0000000+	.0604623-	.0000000+	1.790279+
0000000+	0000000+	20.0	1.000	
1576.053+	.0000000+	.0500000+	.002163	2033.3
.1529340+	.2427445+	.0917463-	.6300205+	.0001147+
.0000000+	136.7601+	.0000000+	0000000+	.0021651+
.0000000+	.0000000+	.1529340+	.0000000+	.5999078-
0000000+	0000000+	20.0	1.000	
1577.053+	2.500000+	.0500000+	.002163	2033.3
.6046230+	.3036421+	.1220542-	1.991235+	.0001147+
.0000000+	136.7601+	.0000000+	0000000+	.0021651+
.0000000+	.0000000+	.6046230+	.0000000+	.2018683-
0000000+	0000000+	20.0	1.000	
1578.053+	2.500000+	.0500000+	.002139	2033.3
.6343488+	.3042742+	.0214300-	2.082179+	.0001143+
.0000000+	193.4787+	.0000000+	0000000+	.0021417+
.0000000+	.0000000+	.6343488+	.0000000+	.0337827-
0000000+	0000000+	40.0	1.000	

G.E.M.
FORCE

1579.053+	.0000000+	.0500000+	.002130	2033.3
.1527468+	.2414536+	.0869739-	.6326137+	.0001155+
.0000000+	193.8276+	.0000005+	0000000+	.0021340+
.0000000+	.0000000+	.1527468+	.0000000+	.5693990-
0000000+	0000000+	40.0	1.000	

1580.053+	2.500000-	.0500000+	.002123	2033.3
.0161731-	.2576929+	.1096836-	.0627615-	.0001157+
.0000000+	194.1759+	.0000005+	0000000+	.0021263+
.0000000+	.0000000+	.0161731-	.0000000+	6.781815+
0000000+	0000000+	40.0	1.000	

1584.053+	2.500000+	.0500000+	.002157	2031.8
1.152340+	.2977215+	.0816895+	3.870530+	139.0786+
.1834237+	96.81579+	1.436528+	6.082395+	.0021277+
8.757471+	2.591527+	.9737344+	.1549941+	.0708901+
5.451856+	6.282395+	10.0	1.010	

1585.053+	.0000000+	.0500000+	.002157	2031.8
1.052755+	.2791139+	.0488304+	3.771776+	132.2428+
.1744083+	96.81579+	1.365922+	6.036152+	.0021231+
8.776183+	2.464152+	.8964134+	.1485074+	.0463834+
5.733670+	6.036152+	10.0	1.009	

1586.053+	2.500000-	.0500000+	.002157	2031.8
1.045642+	.2554315+	.0058601+	4.093629+	132.3608+
.1832922+	96.81579+	1.367141+	5.704783+	.0021194+
9.231447+	2.589669+	.8836720+	.1549002+	.0056043+
5.455769+	5.704783+	10.0	1.009	

1587.053+	2.500000-	.0500000+	.002146	2031.8
.7540005+	.2791139+	.0231523-	2.701407+	139.4513+
.1042186+	137.2989+	1.015676+	7.234794+	.0021156+
9.981863+	2.944935+	.6828362+	.0943827+	.0307060-
9.595210+	7.234794+	20.0	1.010	

1588.053+	.0000000+	.0500000+	.002144	2031.8
.8322458+	.3087169+	.0369852+	2.695821+	139.4513+
.0919576+	137.4232+	1.014757+	9.050317+	.0021156+
8.807526+	2.598477+	.7621595+	.0842135+	.0444402+
10.87457+	9.050317+	20.0	1.010	

1589.053+	2.500000+	.0500000+	.002139	2031.8
1.010076+	.3391657+	.0748312+	2.978119+	139.6992+
.0829090+	137.5474+	1.015643+	12.18294+	.0021095+
7.949464+	2.34278+	.9327433+	.0765613+	.0740847+
12.06141+	12.18294+	20.0	1.010	

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1590.053+	2.500000+	.0500000+	.002116	2031.8
.9003081+	.343163+	.0332477+	2.63556+	132.8318+
.0376187+	194.5812+	.6826552+	23.93244+	.001058+
7.521139+	2.103859+	.8676675+	.0362548+	.0369 93+
26.58250+	23.93244+	40.0	1.009	
1591.053+	.0000000+	.0500000+	.002105	2031.8
.6972446+	.3085478+	.0070857+	2.259761+	139.8230+
.0489159+	195.1017+	.7166673+	14.5392+	.002104+
9.297269+	2.735668+	.6647 87+	.0466348+	.0101625+
20.44321+	14.5392+	40.0	1.010	
1592.053+	2.500000-	.0500000+	.002100	2031.8
.5355126+	.2850434+	.0415519-	1.878704+	132.8318+
.0538464+	195.2749+	.6802301+	9.945187+	.0021022+
10.78425+	3.011406+	.5081505+	.0510951+	.0775928-
18.57134+	9.945187+	40.0	1.009	
1596.053+	2.500000-	.0500000+	.002150	2030.4
2.752813+	.1420943+	.1021953+	19.37313+	301.6064+
.9281380+	97.02069+	3.108681+	2.965952+	.0021511+
20.21117+	13.1133 +	1.427705+	.4813649+	.0371239+
1.077425+	2.965952+	10.0	1.049	
1597.053+	.0000000+	.0500000+	.002145	2030.4
3.001775+	.2469735+	.2166262+	12.15423+	301.8756+
.9090599+	97.10869+	3.108636+	3.302065+	.0021473+
19.81339+	12.84377+	1.572384+	.4761819+	.071660+
1.100037+	3.302065+	10.0	1.049	
1598.053+	2.500000+	.0500000+	.002143	2030.4
2.923530+	.3603107+	.2871371+	8.113913+	299.5535+
.9020671+	97.19661+	3.081933+	3.240923+	.0021473+
19.81339+	12.74497+	1.537027+	.4742562+	.0922158+
1.108514+	3.240923+	10.0	1.043	
1599.053+	2.500000+	.0500000+	.002138	2030.4
1.742737+	.2951841+	.2373900+	5.903897+	301.8756+
.4644831+	137.5881+	2.194052+	3.751991+	.0021473+
20.24726+	13.12502+	1.190001+	.317165+	.1362168+
2.152930+	3.751991+	20.0	1.049	
1600.053+	.0000000+	.0500000+	.002134	2030.4
1.717840+	.2545857+	.119500+	6.747591+	301.8756+
.4644831+	137.7123+	2.194074+	3.69839 +	.0021473+
20.247 6+	13.12502+	1.173001+	.3171652+	.1168818+
2.152930+	3.69839 +	20.0	1.049	

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1601.053+	2.500000-	.0500000+	.002129	2030.4
1.557793+	.2190621+	.1386640+	7.111193+	302.1445+
.4715383+	137.8363+	2.192053+	3.303641+	.001428+
20.58017+	13.32438+	1.058615+	.3204390+	.0890131+
2.120718+	3.303641+	20.0	1.049	

1602.053+	2.500000-	.0500000+	.002115	2030.4
1.063837+	.2688041+	.1022682+	3.957666+	302.1445+
.2416066+	194.6286+	1.552415+	4.403178+	.0021413+
20.88434+	13.51205+	.8568230+	.1945919+	.0961315+
4.138959+	4.403178+	40.0	1.049	

1603.053+	.0000000+	.0500000+	.002108	2030.4
1.142906+	.2824793+	.0650327+	4.045980+	302.1445+
.2332174+	194.9759+	1.549650+	4.900602+	.0021428+
20.14538+	13.04288+	.9267676+	.1891130+	.0569012+
4.287843+	4.900602+	40.0	1.049	

1604.053+	2.500000+	.0500000+	.002099	2030.4
1.221975+	.3011375+	.1116621+	4.044433+	302.1445+
.2298618+	195.3225+	1.546900+	5.316128+	.0021435+
19.84871+	12.85521+	.9935872+	.1869005+	.0913784+
4.358439+	5.316128+	40.0	1.049	

1605.053+	2.500000+	.0300000+	.002145	2030.4
.8251326+	.3383199+	.0587226+	2.438912+	.0001151+
.0000000+	97.11377+	.0000011+	0000000+	.0021464+
.0000000+	.0000000+	.8251326+	.0000000+	.0711675+
0000000+	0000000+	10.0	1.000	

1606.053+	.0000000+	.0300000+	.002145	2030.4
.2062831+	.2605063+	.0292950-	.7918545+	.0001151+
.0000000+	97.11377+	.0000011+	0000000+	.0021464+
.0000000+	.0000000+	.2062831+	.0000000+	.140135-
0000000+	0000000+	10.0	1.000	

1607.053+	2.500000-	.0300000+	.002145	2030.4
.1849435+	.2605063+	.3865306+	.7099385+	.0001151+
.0000000+	97.11377+	.0000011+	0000000+	.0021464+
.0000000+	.0000000+	.1849435+	.0000000+	2.089993+
0000000+	0000000+	10.0	1.000	

1608.053+	2.500000-	.0300000+	.002142	2030.4
.2240662+	.2528941+	.0461172-	.8860077+	.0001152+
.0000000+	137.4783+	.0000008+	0000000+	.001426+
.0000000+	.0000000+	.2240662+	.0000000+	.2058199-
0000000+	0000000+	20.0	1.000	

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1620.053+	2.500000+	.0300000+	.002216	2024.8
1.106104+	.3290161+	.0971934+	3.361854+	131.6511+
.0651105+	135.1508+	.9741055+	16.98811+	.0021371+
6.539256+	1.839845+	1.038488+	.0611302+	.0378700+
.0000000+	16.98811+	20.0	1.009	

1621.053+	.0000000+	.0300000+	.002209	2024.8
.9673969+	.2901093+	.0620919+	3.334593+	127.1462+
.0712668+	135.2775+	.9398915+	13.57429+	.0021325+
7.427095+	2.013806+	.9030401+	.0665257+	.041845+
14.03177+	13.57429+	20.0	1.009	

1622.053+	2.500000-	.0300000+	.002202	2024.8
.8286892+	.2698101+	.0497259+	3.071378+	131.7696+
.0825475+	135.5306+	.9722504+	10.03893+	.0021310+
8.306653+	2.332569+	.7654991+	.0762530+	.0600055+
12.11422+	10.03893+	20.0	1.009	

1623.053+	2.500000-	.0300000+	.002182	2024.8
.6271607+	.2799152+	.0031049-	2.240537+	131.7696+
.0460985+	191.5857+	.6877845+	13.60477+	.0021303+
9.184237+	2.578102+	.5995235+	.0440671+	.0049507-
21.69263+	13.60477+	40.0	1.009	

1624.053+	.0000000+	.0300000+	.002173	2024.8
.7852986+	.2927358+	.0156299+	2.682619+	138.5801+
.0392466+	192.1161+	.7213351+	20.00931+	.0021356+
7.416318+	2.194903+	.755642+	.0377645+	.0199031+
25.47987+	20.00931+	40.0	1.010	

1625.053+	2.500000+	.0300000+	.002157	2024.8
.9793770+	.3470094+	.0484858+	2.822335+	132.0064+
.0263893+	192.6451+	.6852311+	37.11253+	.0021256+
5.59663+	1.475848+	.9541964+	.0257108+	.0495067+
37.69402+	37.11253+	40.0	1.009	

1629.053+	2.500000-	.0300000+	.002199	2024.8
3.848248+	.1505523+	.2003965+	25.56085+	296.6021+
.7888666+	95.91392+	3.092378+	4.878198+	.0021858+
17.19163+	11.14561+	2.151221+	.4409668+	.0520747+
1.267641+	4.278198+	10.0	1.048	

1630.053+	.0000000+	.0300000+	.002196	2024.8
4.16834+	.2706559+	.3543128+	15.40088+	296.6021+
.7823470+	96.00318+	3.089503+	5.327996+	.0021880+
17.03201+	11.05349+	2.338681+	.4389420+	.0850000+
1.278205+	5.327996+	10.0	1.048	

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1631.053+	2.500000+	.0300000+	.002196	2024.8
4.061644+	.3992175+	.4760864+	10.17401+	296.6021+
.7823470+	96.00318+	3.029503+	5.191614+	.0011273+
17.03785+	11.05349+	2.278617+	.4389420+	.1172151+
1.170205+	5.191614+	10.0	1.048	

163.053+	2.500000+	.0300000+	.002192	2024.8
2.244210+	.3070253+	.2459809+	7.309551+	296.6021+
.3944333+	135.9022+	2.12467+	5.629728+	.0011365+
17.10573+	11.14561+	1.60941+	.2828628+	.1096065+
2.535202+	5.669728+	20.0	1.048	

1633.053+	.0000000+	.0000000+	.002187	2024.8
2.32000+	.2621979+	.109500+	551.3182+	296.6021+
.3944333+	136.0282+	2.12467+	366.4870+	.0011365+
17.10573+	11.14561+	103.6655+	.2828628+	.0147918+
2.535202+	366.4870+	20.0	1.048	

1634.053+	2.500000-	.0300000+	.002183	2024.8
2.133963+	.2097583+	.0935722+	10.17343+	296.6021+
.4012120+	136.1541+	2.178429+	5.279309+	.0011350+
17.62392+	11.42194+	1.519687+	.2878571+	.0430490+
2.473945+	5.279309+	20.0	1.048	

1635.053+	2.500000-	.0300000+	.002143	2024.8
1.354954+	.2500000+	.0607200+	56.61760+	297.1409+
.2079448+	193.1688+	1.532294+	6.517186+	.0021763+
17.97347+	11.62725+	1.121759+	.1721202+	.0076678+
4.809892+	6.517186+	40.0	1.048	

1636.053+	.0000000+	.0300000+	.002139	2024.8
1.434023+	.2660000+	.112000+	111.3535-	297.1409+
.2013040+	193.5134+	1.532294+	7.123647+	.0011771+
17.40272+	11.25813+	1.193721+	.1675717+	.0275997+
4.967594+	7.123647+	40.0	1.048	

1637.053+	2.500000+	.0300000+	.002136	2024.8
1.448399+	.281000+	.151000+	20.66613-	297.4100+
.1965343+	193.6587+	1.532294+	7.369775+	.0021739+
15.99970+	10.99129+	1.210197+	.1642515+	.0460366+
5.088210+	7.369775+	40.0	1.048	

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1609.053+	.0000000+	.0300000+	.002137	2030.4
.2347360+	.2478193+	.0639186-	.9472060+	.0001153+
.0000000+	137.6025+	.0000008+	.0000000+	.001387+
.0000000+	.0000000+	.2347360+	.0000000+	.2733002-
0000000+	0000000+	20.0	1.000	

1610.053+	2.500000+	.0300000+	.002133	2030.4
.8393591+	.3290161+	.0322190+	2.551118+	.0001154+
.0000000+	137.7267+	.0000008+	.0000000+	.0021348+
.0000000+	.0000000+	.8393591+	.0000000+	.0383853+
0000000+	0000000+	20.0	1.000	

1611.053+	2.500000+	.0300000+	.002116	2030.4
.8302242+	.3260692+	.0290067+	2.546159+	.0001158+
.0000000+	194.4853+	.0000005+	.0000000+	.0021196+
.0000000+	.0000000+	.8302242+	.0000000+	.0349385+
0000000+	0000000+	40.0	1.000	

1612.053+	.0000000+	.0300000+	.002107	2030.4
.2443950+	.2474365+	.0677158-	.9877078+	.0001162+
.0000000+	195.0065+	.0000005+	.0000000+	.00108+
.0000000+	.0000000+	.2443950+	.0000000+	.2566169-
0000000+	0000000+	40.0	1.000	

1613.053+	2.500000-	.0300000+	.002098	2030.4
.2318158+	.2673767+	.0520904-	.8637702+	.0001164+
.0000000+	192.0353+	.0000006+	.0000000+	.001008+
.0000000+	.0000000+	.2318158+	.0000000+	.2247060-
0000000+	0000000+	40.0	1.000	

1617.053+	2.500000-	.0300000+	.002241	2024.8
1.195019+	.2334407+	.0009458+	5.119155+	130.8182+
.1667785+	94.94705+	1.377802+	7.165306+	.0021629+
8.327866+	2.356354+	1.024204+	.1429393+	.0007915+
5.995973+	7.165306+	10.0	1.009	

1618.053+	.0000000+	.0300000+	.002236	2024.8
1.237699+	.2571231+	.0750644+	4.813642+	137.9545+
.1667794+	95.11176+	1.450446+	7.421173+	.0021557+
7.923177+	2.356365+	1.06078+	.1429399+	.0606483+
5.995943+	7.421173+	10.0	1.010	

1619.053+	2.500000+	.0300000+	.002232	2024.8
1.294604+	.2757307+	.1248600+	4.695176+	137.9545+
.1667794+	95.20178+	1.449074+	7.762377+	.001557+
7.923177+	2.356365+	1.109553+	.1429399+	.0964464+
5.995943+	7.762377+	10.0	1.010	

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1638.053+	.0000000+	.0100000+	.002199	2028.3
.4481324+	.2503567+	.0093167-	1.769975+	.0001137+
.0000000+	95.92448+	.0000011+	0000000+	.002000+
.0000000+	.0000000+	.4481324+	.0000000+	.0207901-
0000000+	0000000+	10.0	1.000	

1639.053+	.0000000+	.0100000+	.002186	2028.3
.4267927+	.2466651+	.1046551-	1.716335+	.0001140+
.0000000+	136.0496+	.0000008+	0000000+	.00187+
.0000000+	.0000000+	.4267927+	.0000000+	.2452130-
0000000+	0000000+	20.0	1.000	

1640.053+	.0000000+	.0100000+	.002160	2028.3
.4294383+	.2482912+	.0254649+	1.729776+	.0001146+
.0000000+	192.4871+	.0000005+	0000000+	.0021637+
.0000000+	.0000000+	.4294383+	.0000000+	.0592913+
0000000+	0000000+	40.0	1.000	

1642.053+	.0000000+	.0100000+	.002186	2028.3
2.005922+	.2283659+	.0795133+	8.783821+	151.0722+
.1089187+	96.19155+	1.570535+	12.4167+	.0021176+
4.809772+	1.538873+	1.808902+	.0382206+	.039639+
9.181152+	10.41672+	10.0	1.012	

1643.053+	.0000000+	.0100000+	.002179	2028.3
1.148783+	.2477445+	.0379617+	4.732479+	132.5905+
.0477991+	130.2937+	.9728735+	24.03356+	.001111+
4.825023+	1.350673+	1.096377+	.0450186+	.033041+
20.92067+	24.03356+	20.0	1.009	

1644.053+	.0000000+	.0100000+	.002149	2028.3
.9074962+	.2632485+	.023127+	3.44797+	132.7142+
.061623+	193.0041+	.6876239+	34.68704+	.001117+
5.220604+	1.463154+	.884359+	.0254953+	.0254792+
36.22279+	34.68704+	40.0	1.009	

1645.053+	.0000000+	.0100000+	.002126	2028.3
2.080951+	.257000+	.181400+	8.902036+	298.7515+
.0874283+	194.0439+	1.539807+	23.80179+	.0021685+
7.547280+	4.889504+	1.913644+	.0803991+	.0173741+
11.43793+	23.80179+	40.0	1.048	

1646.053+	.0000000+	.0100000+	.002142	2038.3
3.517483+	.284000+	.340800+	14.95958+	298.4836+
.1732081+	137.4186+	2.172076+	20.30783+	.021724+
7.548050+	4.894391+	2.998175+	.1476363+	.0139142+
5.773399+	20.30783+	20.0	1.048	

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1647.053+	.0000000+	.0100000+	.002154	2028.3
6.515702+	.334000+	.715000+	27.71078+	20.5273+
.3289707+	96.90016+	3.101412+	19.80633+	.0021778+
7.101558+	4.647907+	4.902818+	.2475379+	.0148194+
3.039784+	19.80633+	10.0	1.049	

1649.053+	.0000000+	.0100000+	.002186	2028.3
12.03555+	.441000+	1.29500+	43.91910+	301.8000+
.748294+	68.01414+	4.437313+	16.08399+	.0022103+
7.924305+	5.286187+	6.88171+	.4280138+	.0131466-
1.336373+	16.08399+	5.0	1.050	

1650.053+	2.500000+	.0300000+	.002183	2028.3
7.767628+	.5751439+	.9285295+	13.50553+	293.3574+
1.537228+	68.07697+	1.382648+	5.053008+	.001998+
16.54574+	10.85947+	3.061461+	.6058691+	.1195383+
.6505214+	5.053008+	5.0	1.049	

1651.053+	.0000000+	.0300000+	.002183	2028.3
8.151741+	.3011047+	.7574403+	27.07277+	298.3574+
1.538540+	68.07697+	4.382648+	5.298361+	.0022005+
16.55419+	10.86873+	3.211192+	.6060727+	.0929176+
.6499368+	5.298361+	5.0	1.049	

1652.053+	2.500000-	.0300000+	.002179	2028.3
7.596911+	.0405983+	.4841110+	187.1234+	296.6021+
1.525576+	68.13974+	1.352851+	11.979697+	.0021918+
16.57779+	10.77716+	3.007990+	.6040508+	.0637247+
.6554897+	4.979697+	5.0	1.048	

1653.053+	2.500000-	.0500000+	.002179	2028.3
5.391815+	.0135327-	.0405544+	398.4257-	302.3502+
1.843574+	68.13974+	1.43708+	2.924652+	.0021880+
19.68617+	13.02359+	1.896139+	.6483299+	.0075214+
.5424244+	2.94465+	5.0	1.050	

1654.053+	.0000000+	.0500000+	.002176	2028.3
5.775928+	.2300575+	.2327411+	25.10644+	303.4477+
1.830256+	68.20246+	1.449219+	3.155803+	.0021730+
19.60817+	12.92951+	2.040779+	.6466751+	.0402950+
.5463715+	3.155803+	5.0	1.050	

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1655.053+	2.500000+	.0500000+	.002176	2028.3
5.519853+	.4668815+	.3250707+	11.82281+	298.2156+
1.794765+	68.20246+	4.372505+	3.075528+	.0021644+
19.64266+	12.67879+	1.975062+	.6421882+	.0588912+
.3571758+	3.075522+	5.0	1.048	

1656.053+	2.500000+	.1000000+	.002176	2028.3
2.873737+	.4026007+	.1593355+	7.137934+	299.9863+
2.030935+	68.20246+	4.398468+	1.414982+	.0021700+
22.03239+	14.34717+	.9481356+	.6700682+	.0554454+
.4923832+	1.414982+	5.0	1.049	

1657.053+	.0000000+	.1000000+	.002170	2028.3
2.987549+	.2029919+	.0492045+	14.71757+	303.7215+
2.042870+	68.26512+	4.449146+	1.462427+	.0021661+
21.93580+	14.43142+	.9818124+	.6713629+	.0164705+
.4895072+	1.462427+	5.0	1.050	

1658.053+	2.500000-	.1000000+	.002165	2028.3
2.660341+	.0101495+	.0284224-	262.1129+	300.7975+
2.023203+	68.32772+	4.402276+	1.314915+	.0021575+
22.02241+	14.92555+	.8799743+	.6692250+	.0106864-
.4942656+	1.314915+	5.0	1.049	

1659.053+	2.500000-	.1500000+	.002170	2028.3
1.636038+	.0811967+	.1897850-	20.14905+	300.7975+
2.076027+	68.26512+	4.406313+	.7880356+	.0021568+
22.60522+	14.66621+	.5318553+	.6749127+	.1160027-
.4816794+	.7880356+	5.0	1.049	

1660.530+	.0000000+	.1500000+	.002165	2028.3
1.815008+	.2190000+	.0218000+	8.616846+	301.3370+
2.053378+	68.32772+	4.410172+	.8660524+	.0021491+
22.35006+	14.50535+	.9024149+	.674884+	.0045635+
.4870144+	.8660594+	5.0	1.049	

1661.053+	2.500000+	.1500000+	.002161	2028.3
1.863661+	.3992175+	.0035971+	4.668085+	302.1445+
2.085325+	68.39026+	4.417947+	.8936732+	.0021376+
22.80005+	14.73189+	.6040269+	.6758953+	.0019301+
.4795254+	.893573+	5.0	1.049	

1662.053+	2.500000+	.2500000+	.002167	2029.7
1.138114+	.3890679+	.0147120+	2.92231+	300.7975+
2.113123+	68.30033+	4.404041+	.535593+	.0021553+
22.99322+	14.92777+	.3655858+	.6787792+	.0129260+
.4732330+	.535593+	5.0	1.049	

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FORCE

1663.053+	.0000000+	.2500000+	.002167	2029.7
.8678119+	.3146375+	.0689962+	2.758132+	301.6064+
2.11352+	68.30033+	4.415885+	.4106036+	.0021467+
23.05926+	14.93045+	.2787252+	.6788183+	.0795059+
.4731481+	.4106036+	5.0	1.049	

1664.053+	2.500000-	.2500000+	.002162	2029.7
.8251326+	.2402071+	.0125117+	3.435087+	305.6308+
2.151108+	68.36285+	4.470715+	.3835847+	.0021398+
23.23527+	15.19611+	.2618546+	.6826514+	.0151633+
.4648764+	.3835847+	5.0	1.049	

1665.053+	2.500000-	.3000000+	.002164	2031.1
.6401891+	.2131415+	.1266215-	3.003586+	300.7975+
2.113123+	68.33905+	4.401546+	.3029586+	.0021575+
23.00118+	14.92777+	.2056420+	.6787792+	.1977876-
.4732330+	.3029586+	5.0	1.049	

1666.053+	.0000000+	.3000000+	.002164	2031.1
.7397741+	.3112543+	.0921878-	2.376750+	301.3370+
2.112939+	68.33905+	4.409441+	.3501160+	.0021498+
23.04044+	14.92647+	.2376448+	.6787602+	.1246162-
.4732742+	.3501160+	5.0	1.049	

1667.053+	2.500000+	.3000000+	.002162	2031.1
.9389440+	.4567319+	.0232072-	2.055788+	301.6064+
2.113502+	68.40149+	4.409355+	.4442596+	.0021460+
23.06718+	14.93045+	.3015716+	.6788103+	.0247162-
.4731481+	.4442596+	5.0	1.049	

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT
AND A JET CONVERGENCE ANGLE OF 0°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP	
C_L	C_D	C_M	L/D	V_J	
C_μ	V_o	V_J/V_o	C_L/C_μ	ρ_1	
Q	$\dot{m}V_J$	C_L'	C_μ'	q	P_M/P_o

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT
AND A JET CONVERGENCE ANGLE OF 0°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP	
C_L	C_D	C_M	L/D	V_J	
C_{μ}	V_o	V_J/V_o	C_L/C_{μ}	p_1	
Q	$\dot{m}V_J$	C_L'	C_{μ}'	q	P_M/P_o

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

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FORCE

1668.050+	2.500000+	.5000000+	.002292	2031.8	
.2347360+	.2520483+	.0420271-	.9313133+	.0111352+	
.0000000+	93.86093+	.0001186+	0000000+	.0022978+	
.0000000+	.0000000+	.2347360+	.0000000+	10.00	1.000
1669.050+	.0000000+	.5000000+	.002290	2031.8	
.1280378+	.2300575+	.0811083-	.5565468+	.0011145+	
.0000000+	93.95184+	.0000118+	0000000+	.0022933+	
.0000000+	.0000000+	.1280378+	.0000000+	10.0	1.000
1670.050+	2.500000-	.5000000+	.002285	2031.8	
.0569057+	.2182163+	.1100889-	.2607764+	.0111567+	
.0000000+	94.04266+	.0001186+	0000000+	.0022889+	
.0000000+	.0000000+	.0569057+	.0000000+	10.0	1.000
1671.050+	2.500000-	.5000000+	.002278	2031.8	
.0391226+	.1953797+	.1396286-	.2002390+	.0011178+	
.0000000+	133.2598+	.0000083+	0000000+	.0022801+	
.0000000+	.0000000+	.0391226+	.0000000+	20.0	1.000
1672.050+	.0000000+	.5000000+	.002272	2031.8	
.1600472+	.2131415+	.1091036-	.7508965+	.0011199+	
.0000000+	133.5158+	.0000083+	0000000+	.0022714+	
.0000000+	.0000000+	.160047+	.0000000+	20.0	1.000
1673.050+	2.500000+	.5000000+	.002267	2031.8	
.2311794+	.2469735+	.0731638-	.9360491+	.0011210+	
.0000000+	133.6437+	.0000083+	0000000+	.0022670+	
.0000000+	.0000000+	.2311794+	.0000000+	20.0	1.000
1674.050+	2.500000+	.5000000+	.002244	2031.8	
.2408009+	.2367527+	.0926187-	1.017098+	.0011263+	
.0000000+	188.9400+	.0000059+	0000000+	.0022456+	
.0000000+	.0000000+	.2408009+	.0000000+	40.0	1.000
1675.050+	.0000000+	.5000000+	.002231	2031.8	
.1437617+	.2145304+	.1197914-	.6701228+	.0011295+	
.0000000+	189.4760+	.0000059+	0000000+	.0022329+	
.0000000+	.0000000+	.1437617+	.0000000+	40.0	1.000
1676.050+	2.500000-	.5000000+	.002226	2031.8	
.0341434+	.2089749+	.136390-	.1633852+	.0001130+	
.0000000+	189.6543+	.0000059+	0000000+	.0022287+	
.0000000+	.0000000+	.0341434+	.0000000+	40.0	1.000

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1680.050+ .3350606+ .2656758+ 12.39895+	2.500000- .2402071+ 94.31459+ 3.753637+	.5000000+ .0858992- 1.439922+ .2810045+	.002274 1.480641+ 1.338701+ .2099082+	2031.8 135.8057+ .0022291+ 10.0	1.010
1681.050+ .4196775+ .2601223+ 12.17003+	.0000000+ .2605063+ 94.40506+ 3.676163+	.5000000+ .0745556- 1.441239+ .3330281+	.002272 1.611014+ 1.612958+ .2064703+	2031.8 136.0603+ .0022200+ 10.0	1.010
1682.050+ .4972248+ .2544484+ 11.90035+	2.500000+ .2977215+ 94.49544+ 3.595009+	.5000000+ .0026476+ 1.441705+ .3969273+	.002267 1.672451+ 1.956872+ .2020368+	2031.8 136.1374+ .0022167+ 10.0	1.010
1683.050+ .3576700+ .1303301+ 12.21553+	2.500000+ .2808075+ 134.2810+ 3.683028+	.5000000+ .0316753- 1.015142+ .3429679+	.002244 1.380564+ 2.974318+ .1153097+	2031.8 136.3143+ .0022118+ 20.0	1.010
1684.050+ .3163379+ .1363317+ 12.78160+	.0000000+ .2469735+ 134.4031+ 3.852363+	.5000000+ .0741854- 1.014132+ .2785612+	.002240 1.281667+ 2.321821+ .1199752+	2031.8 136.3143+ .0022110+ 20.0	1.010
1685.050+ .2362226+ .1296356+ 12.80540+	2.500000- .3317491+ 134.4081+ 3.663150+	.5000000+ .0924375- 1.9643700+ .2109464+	.002240 1.028235+ 1.338171+ .1147588+	2031.8 129.6191+ .0022069+ 20.0	1.009
1686.050+ .1327438+ .0740685+ 14.48723+	2.500000- .2200860+ 190.1783+ 4.142348+	.5000000+ .1223365- .680.326+ .1422133+	.002212 .6940325+ 2.062235+ .0680607+	2031.8 129.4986+ .0022079+ 40.0	1.009
1687.050+ .2300188+ .0719112+ 14.06036+	.0000000+ .2256416+ 190.4335+ 4.021697+	.5000000+ .0918562- .6796634+ .2145875+	.002205 1.013399+ 3.198649+ .0670869+	2031.8 129.4986+ .0022087+ 40.0	1.009
1688.050+ .3234630+ .0692157+ 13.66397+	2.500000+ .2461544+ 191.0650+ 3.204677+	.5000000+ .0766709- .6704036+ .3023539+	.002194 1.314049+ 4.13790+ .0652681+	2031.8 129.6191+ .0022046+ 40.0	1.009

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FORCE

1689.050+	2.500000+	.5000000+	.002187	2031.8	
.3575074+	.3072657+	.0535535-	1.163837+	299.7155+	
.3029089+	191.4085+	1.565842+	1.10577+	.0021814+	
25.91059+	16.94044+	.2744684+	.2324866+	40.0	1.049
1690.050+	.0000000+	.5000000+	.002183	2031.8	
.2803354+	.2880349+	.0501013-	.9732689+	300.5273+	
.3087360+	191.5849+	1.568637+	.900102+	.0021733+	
26.43535+	17.2663+	.2142032+	.2359039+	40.0	1.049
1691.050+	2.500000-	.5000000+	.002180	2031.8	
.2120486+	.2807699+	.1190044-	.7552396+	301.0674+	
.3159781+	191.7613+	1.70011+	.6710863+	.0021655+	
27.10407+	17.67134+	.1611332+	.2401089+	40.0	1.049
1692.050+	2.500000-	.5000000+	.002194	2031.8	
.2525190+	.3044879+	.0322643-	.8293235+	301.337+	
.6093744+	135.7912+	2.219119+	.4143906+	.0021609+	
26.44335+	17.21926+	.1569050+	.3786405+	20.0	1.049
1693.050+	.0000000+	.5000000+	.002199	2031.8	
.3485474+	.3230955+	.0301152-	1.078775+	298.7515+	
.5910122+	135.6655+	2.202118+	.5897465+	.0021626+	
25.84271+	16.70039+	.2190727+	.3714693+	20.0	1.048
1694.050+	2.500000+	.5000000+	.002203	2031.8	
.416122+	.3560817+	.0121810-	1.168616+	298.2156+	
.5801196+	137.9621+	2.161576+	.7173054+	.0021689+	
25.34413+	16.39259+	.2633490+	.3671365+	20.0	1.048
1695.050+	2.500000+	.5000000+	.002210	2031.8	
.4481324+	.417503+	.0437589+	1.085722+	300.5273+	
1.162627+	95.65766+	3.141676+	.3854479+	.0021696+	
25.19232+	16.42634+	.2072166+	.5375995+	10.0	1.049
1696.050+	.0000000+	.5000000+	.002210	2031.8	
.320045+	.3467779+	.0095327-	.9230533+	298.2156+	
1.166724+	95.65766+	3.117530+	.2743367+	.0021703+	
25.46989+	16.49221+	.1477272+	.5348837+	10.0	1.048
1697.050+	2.500000-	.5000000+	.002212	2031.8	
.241849+	.3078711+	.0043848-	.7855533+	300.7975+	
1.126731+	95.56838+	3.147453+	.2020014+	.0021679+	
25.92100+	16.90818+	.1100950+	.5447782+	10.0	1.049

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FORCE

1701.050+	2.500000+	.4000000+	.002242	2029.7	
.2205095+	.2571231+	.0177042-	.8576029+	.0001126+	
.0000000+	94.99568+	.0000011+	0000000+	.0022432+	1.000
.0000000+	.0000000+	.2205095+	.0000000+	10.0	

1702.050+	.0000000+	.4000000+	.002238	2029.7	
.1351510+	.2283659+	.0599823-	.5918177+	.0001127+	
.0000000+	95.08560+	.0000011+	0000000+	.0022390+	1.000
.0000000+	.0000000+	.1351510+	.0000000+	10.0	

1703.050+	2.500000-	.4000000+	.002233	2029.7	
.0497924+	.2013003+	.0970079-	.2473541+	.0001128+	
.0000000+	95.17543+	.0000011+	0000000+	.0022348+	1.000
.0000000+	.0000000+	.0497924+	.0000000+	10.0	

1704.050+	2.500000-	.4000000+	.002223	2029.7	
.0462358+	.1903049+	.1114867-	.2429567+	.0001130+	
.0000000+	134.8662+	.0000008+	0000000+	.0022264+	1.000
.0000000+	.0000000+	.0462358+	.0000000+	20.0	

1705.050+	.0000000+	.4000000+	.002214	2029.7	
.1458208+	.2156789+	.1036098-	.6761014+	.0000049+	
.0000000+	135.1194+	.0000000+	0000000+	.0022180+	1.000
.0000000+	.0000000+	.1458208+	.0000000+	20.0	

1706.050+	2.500000+	.4000000+	.002214	2029.7	
.2418492+	.2444361+	.0568054-	.9894166+	.0000049+	
.0000000+	135.1194+	.0000000+	0000000+	.0022180+	1.000
.0000000+	.0000000+	.2418492+	.0000000+	20.0	

1707.050+	2.500000+	.4000000+	.002191	2029.7	
.2461920+	.2401715+	.0675439-	1.025067+	.0001139+	
.0000000+	191.1748+	.0000005+	0000000+	.0021934+	1.000
.0000000+	.0000000+	.2461920+	.0000000+	40.0	

1708.050+	.0000000+	.4000000+	.002184	2029.7	
.1155587+	.217949+	.1025112-	.6578562+	.0001141+	
.0000000+	191.5285+	.0000005+	0000000+	.0021953+	1.000
.0000000+	.0000000+	.1155587+	.0000000+	40.0	

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1709.050+	2.500000-	.4000000+	.002177	2029.7	
.0287723+	.2047013+	.1164341-	.1404599+	.0001143+	
.0000000+	131.2816+	.0000000+	0000000+	.0021772+	1.000
.0000000+	.0000000+	.0287723+	.0000000+	40.0	
1713.050+	2.500000-	.4000000+	.002215	2029.7	
.3485471+	.2368239+	.1140122-	1.471757+	136.2475+	
.2718227+	35.53391+	1.433496+	1.262259+	.0001891+	1.010
12.80585+	3.340485+	.2740534+	.2137269+	10.0	
1714.050+	.0000000+	.4000000+	.002210	2029.7	
.4034531+	.2757307+	.0318536-	1.470467+	142.2166+	
.701624+	25.6233+	1.194579+	1.500774+	.0001812+	1.011
11.24103+	3.317028+	.3192135+	.2126991+	10.0	
1715.050+	2.500000+	.4000000+	.002208	2029.7	
.5050321+	.3011047+	.0132499+	1.677283+	137.3260+	
.3529534+	25.71264+	1.434773+	1.396565+	.0021776+	1.010
11.94981+	3.573838+	.4030750+	.2018857+	10.0	
1716.050+	2.500000+	.4000000+	.002200	2029.7	
.4018906+	.2850345+	.0161593-	1.409997+	137.3260+	
.1296452+	135.6175+	1.012597+	3.099948+	.0021763+	1.010
12.25780+	3.663448+	.3357720+	.1147670+	20.0	
1717.050+	.0000000+	.4000000+	.002200	2029.7	
.3165379+	.2486651+	.0623626-	1.272948+	137.3260+	
.1350342+	135.6175+	1.012597+	2.330325+	.0021763+	1.010
12.84286+	3.938304+	.2786837+	.1195898+	20.0	
1718.050+	2.500000-	.4000000+	.002191	2029.7	
.2382926+	.2351323+	.0945029-	1.013440+	130.4597+	
.1316233+	135.8693+	.9601849+	1.810412+	.0021763+	1.009
13.09972+	3.719317+	.2105759+	.1163137+	20.0	
1719.050+	2.500000-	.4000000+	.002166	2029.7	
.1527468+	.2264963+	.1134983-	.6743901+	130.4597+	
.0743784+	192.2910+	.6784193+	2.055024+	.0021733+	1.009
14.66127+	4.156883+	.1421789+	.0091859+	40.0	
1720.050+	.0000000+	.4000000+	.002159	2029.7	
.2408009+	.2200860+	.0978930-	1.094121+	137.3260+	
.0771728+	192.5757+	.7131014+	3.120278+	.0021740+	1.009
14.45617+	4.315960+	.2235490+	.0716439+	40.0	

G.E.M.
FORCE

1721.050+	2.500000+	.4000000+	.002150	2029.7	
.3432312+	.2585476+	.0600597-	1.327535+	142.9166+	
.0776956+	123.0205+	.7407816+	4.417635+	.0021788+	
13.9456+	4.34156+	.3184862+	.070942+	40.0	1.011
1722.050+	2.500000+	.4000000+	.002143	2029.7	
.3773746+	.3188042+	.0097097-	1.183719+	301.0674+	
.0995241+	113.2071+	1.777778+	1.259619+	.0021581+	
27.70674+	16.75309+	.2103788+	.2305289+	40.0	1.049
1723.050+	.0000000+	.4000000+	.002141	2029.7	
.2821324+	.2961546+	.0381847-	.9526526+	302.6817+	
.3104442+	123.4421+	1.564714+	.9088003+	.0021381+	
26.82720+	17.36189+	.7152251+	.7362004+	40.0	1.049
1724.050+	2.500000-	.4000000+	.002136	2029.7	
.2048605+	.2876075+	.0403300-	.7122918+	300.3534+	
.3100251+	123.7150+	1.751276+	.6403607+	.0021388+	
27.00678+	17.34960+	.1763552+	.2367724+	40.0	1.048
1725.050+	2.500000-	.4000000+	.002151	2029.7	
.2276228+	.3171001+	.0085515+	.7293261+	303.2179+	
.6058146+	127.1144+	2.711421+	.3757102+	.0021313+	
26.49056+	17.11257+	.1417463+	.3727754+	20.0	1.049
1726.050+	.0000000+	.4000000+	.002160	2029.7	
.3663304+	.2682643+	.1585284-	1.362003+	306.9874+	
.2467700+	136.8649+	2.242995+	.5663911+	.0021275+	
27.97246+	18.27623+	.2224525+	.3977543+	20.0	1.050
1727.050+	2.500000+	.4000000+	.002160	2029.7	
.3083399+	.3679229+	.0769048+	1.082672+	303.4856+	
.5840340+	136.8640+	2.217109+	.6820490+	.0021231+	
25.61193+	16.50321+	.2514718+	.3787004+	20.0	1.049
1731.050+	2.500000-	.4000000+	.002188	2026.2	
.2703020+	.2977215+	.0136090-	.9079022+	302.2115+	
1.177114+	0000000+	0000000+	.7296311+	.0021083+	
26.10125+	16.63102+	.1241561+	.5406763+	10.0	1.048
1732.050+	.0000000+	.4000000+	.002188	2026.2	
.334210+	.3450853+	.0073104+	.9688037+	304.5542+	
1.175525+	96.14788+	3.167560+	.2844006+	.0021068+	
25.56401+	16.60661+	.1536734+	.5403415+	10.0	1.049

G.E.M.
FORCE

1733.050+	2.500000+	.4000000+	.002184	2026.2	
.4481324+	.4076755+	.0499025+	1.099237+	304.8208+	
1.163156+	96.23687+	3.167401+	.3852725+	.0021031+	1.049
25.63402+	16.43381+	.2071659+	.5377126+	10.0	
1734.050+	2.500000+	.3500000+	.002197	2026.2	
.1133963+	.2621279+	.0023359+	.8138750+	.0001137+	
.0000000+	.0000000+	.0000011+	.0000000+	.0021977+	1.000
.0000000+	.0000000+	.1133963+	.0000000+	10.0	
1735.050+	.0000000+	.3500000+	.002197	2026.2	
.1133963+	.1133963+	.0133553-	.6050389+	.0001137+	
.0000000+	.0000000+	.0000011+	.0000000+	.0021977+	1.000
.0000000+	.0000000+	.1133963+	.0000000+	10.0	
1736.050+	2.500000-	.3500000+	.002193	2026.2	
.0021932-	.2193079+	.0753437-	.1293852-	.0001138+	
.0000000+	.0000000+	.0000011+	.0000000+	.0021936+	1.000
.0000000+	.0000000+	.0021932-	.0000000+	10.0	
1737.050+	2.500000-	.3500000+	.002183	2026.2	
.0000000+	.2013003+	.1084401-	.0000000+	.0001140+	
.0000000+	.1011108+	.0000000+	.0000000+	.0021855+	1.000
.0000000+	.0000000+	.0000000+	.0000000+	20.0	
1738.050+	.0000000+	.3500000+	.002180	2026.2	
.1122544+	.2106211+	.0753436-	.6494240+	.0001141+	
.0000000+	.1011108+	.0000000+	.0000000+	.0021815+	1.000
.0000000+	.0000000+	.1122544+	.0000000+	20.0	
1739.050+	2.500000+	.3500000+	.002176	2026.2	
.2347360+	.2495109+	.0753436-	.9407843+	.0001142+	
.0000000+	.1011108+	.0000000+	.0000000+	.0021775+	1.000
.0000000+	.0000000+	.2347360+	.0000000+	20.0	
1740.050+	2.500000+	.3500000+	.002146	2026.2	
.2400000+	.2440177+	.0773038-	.9868175+	.0001149+	
.0000000+	.1011108+	.0000000+	.0000000+	.0021497+	1.000
.0000000+	.0000000+	.2400000+	.0000000+	40.0	
1741.050+	.0000000+	.3500000+	.002139	2026.2	
.1133963+	.0013360+	.1040607-	.675418+	.0001151+	
.0000000+	.1011108+	.0000000+	.0000000+	.0021420+	1.000
.0000000+	.0000000+	.1133963+	.0000000+	40.0	

G.E.M.
FORCE

1742.050+	2.500000-	.3500000+	.002133	2026.2	
.0107011+	.113237+	.1304527-	.0307548+	.0000115+	
.0000000+	122.3071+	.0000000+	0000000+	.0021342+	
.0000000+	.0000000+	.0107221+	.0000000+	40.0	1.000
1746.050+	2.500000-	.3500000+	.002280	2026.9	
.2631286+	.2537329+	.0001270-	1.037238+	134.9110+	
.2713321+	21.1271+	1.432623+	.2131277+	.0022533+	
12.61049+	3.833651+	.2070170+		10.0	1.010
1747.050+	.0000000+	.3500000+	.002278	2026.9	
.8024331+	.2041007+	.0071273-	1.426703+	135.1672+	
.1220727+	94.21824+	1.43111+	1.564277+	.0022448+	
12.00336+	5.60130+	.3220236+	.2017385+	10.0	1.010
1743.050+	2.500000+	.3500000+	.002273	2026.9	
.3111113+	.3041072+	.0107116+	1.582008+	135.1672+	
.4020000+	20.33204+	1.432701+	2.014300+	.0022448+	
11.44101+	3.471131+	.4111324+	.1272440+	10.0	1.010
1742.050+	2.500000+	.3500000+	.002266	2026.9	
.1267127+	.2771223+	.0107833-	1.533422+	135.1672+	
.1322261+	133.5228+	1.010575+	3.210026+	.0022440+	
12.34006+	3.756978+	.3767072+	.1173533+	20.0	1.010
1750.050+	.0000000+	.3500000+	.002261	2026.9	
.3200244+	.2461732+	.0011271-	1.295068+	135.1672+	
.1322301+	133.5228+	1.010156+	2.360075+	.0022432+	
1.63257+	3.832537+	.2818651+	.1124316+	20.0	1.010
1751.050+	2.500000-	.3500000+	.002257	2026.9	
.2240662+	.2300575+	.1257857-	.973970+	135.1672+	
.1415722+	153.2347+	1.002202+	1.126084+	.0022432+	
13.12333+	4.000447+	.1262735+	.1240151+	20.0	1.010
1752.050+	2.500000-	.3500000+	.002229	2026.9	
.1617513+	.2260622+	.1245613-	.7154099+	135.1672+	
.0722623+	189.2187+	.713131+	2.032714+	.0022401+	
14.52513+	4.445605+	.1498125+	.0736989+	40.0	1.010
1753.050+	.0000000+	.3500000+	.002218	2026.9	
.2455577+	.2333333+	.1002224-	1.032702+	128.5304+	
.0701152+	190.0243+	.6762225+	3.362670+	.0022359+	
14.01158+	4.027553+	.2263007+	.071780+	40.0	1.009

G.E.M.
FORCE

1754.050+	2.500000+	.3500000+	.002206	2026.9	
.3450282+	.0611117+	.0797378-	1.321381+	135.4230+	
.0730754+	140.4105+	.7112157+	.720243+	.0022332+	
13.51676+	4.087924+	.3215261+	.0681164+	40.0	1.010
1755.050+	2.500000+	.3500000+	.002200	2026.9	
.4061770+	.3106845+	.0765776-	1.307200+	298.0851+	
.3055649+	190.7561+	1.562649+	1.329102+	.0022000+	
26.05800+	17.08898+	.3110737+	.2340480+	40.0	1.049
1756.050+	.0000000+	.3500000+	.002197	2026.9	
.2965086+	.2888896+	.0882101-	1.026373+	298.6295+	
.3127562+	140.9337+	1.564048+	.2480502+	.0021935+	
26.70166+	17.49116+	.2258672+	.2382439+	40.0	1.049
1757.050+	2.500000-	.3500000+	.002192	2026.9	
.2030635+	.2846161+	.0883733-	.7134645+	298.9014+	
.3203441+	191.1110+	1.564019+	.5338917+	.0021918+	
27.34627+	17.91552+	.1537958+	.2426217+	40.0	1.049
1758.050+	2.500000-	.3500000+	.002219	2026.9	
.2418492+	.3019505+	.0556197-	.009563+	297.4100+	
.6079703+	135.0729+	2.701847+	.3077977+	.0021784+	
26.51634+	17.17958+	.1504065+	.3780979+	20.0	1.048
1759.050+	.0000000+	.3500000+	.002221	2026.9	
.3236511+	.3264787+	.0296620-	.9013391+	300.5273+	
.5998100+	134.9461+	2.227016+	.5295894+	.0021644+	
26.05630+	16.94899+	.2023060+	.3749258+	20.0	1.049
1760.050+	2.500000+	.3500000+	.002219	2026.9	
.4730286+	.3560817+	.0442534-	1.328427+	300.5273+	
.5958465+	135.0729+	2.224926+	.7038765+	.0021644+	
25.88412+	16.83700+	.2064123+	.3733733+	20.0	1.049
1761.050+	2.500000+	.3500000+	.002221	2026.9	
.5477173+	.4059839+	.0196893-	1.349110+	298.2156+	
1.161550+	.05.41637+	3.125413+	.4715399+	.0021629+	
25.44243+	16.41112+	.2533910+	.5373690+	10.0	1.048
1762.050+	.0000000+	.3500000+	.002226	2026.9	
.3556606+	.3586191+	.0774032-	.2017502+	300.5273+	
1.192353+	.05.32665+	3.152606+	.2022844+	.0021651+	
25.88959+	16.84633+	.1022277+	.5438692+	10.0	1.049

G.E.M.
FORCE

1763.050+	2.500000-	.3500000+	.002226	2026.9	
.263188+	.3332451+	.0216700-	.7397755+	300.7975+	
1.209951+	25.3261+	3.155431+	.2175105+	.0021627+	
26.27750+	17.09501+	.1190924+	.5475020+	10.0	1.049
1767.050+	2.500000+	.3000000+	.002260	2029.0	
.2062851+	.263882+	.0406910-	.7817025+	.0001122+	
.0000000+	14.65661+	.0000011+	0000000+	.0022596+	
.0000000+	.0000000+	.2062851+	.0000000+	10.0	1.000
1768.050+	.0000000+	.3000000+	.002255	2029.0	
.1778303+	.2368232+	.0594169-	.7508965+	.0001123+	
.0000000+	94.74689+	.0000011+	0000000+	.0022553+	
.0000000+	.0000000+	.1778303+	.0000000+	10.0	1.000
1769.050+	2.500000-	.3000000+	.002248	2029.0	
.007113+	.2165245+	.0853617-	.0378517+	.0001124+	
.0000000+	94.83370+	.0000011+	0000000+	.0022510+	
.0000000+	.0000000+	.007113+	.0000000+	10.0	1.000
1770.050+	2.500000-	.3000000+	.002237	2029.0	
.0284522+	.2063751+	.1231545-	.1376625+	.0001127+	
.0000000+	134.5082+	.0000000+	0000000+	.0022382+	
.0000000+	.0000000+	.0284522+	.0000000+	20.0	1.000
1771.050+	.0000000+	.3000000+	.002232	2029.0	
.1422642+	.221599+	.0874650-	.6419870+	.0001128+	
.0000000+	134.6352+	.0000000+	0000000+	.0022340+	
.0000000+	.0000000+	.1422642+	.0000000+	20.0	1.000
1772.050+	2.500000+	.3000000+	.002228	2029.0	
.2240662+	.2495102+	.0610023-	.8980214+	.0001129+	
.0000000+	134.7621+	.0000000+	0000000+	.0022298+	
.0000000+	.0000000+	.2240662+	.0000000+	20.0	1.000
1773.050+	2.500000+	.3000000+	.002190	2029.0	
.2354092+	.2500006+	.0781153-	.9416371+	.0001130+	
.0000000+	191.2182+	.0000000+	0000000+	.0021926+	
.0000000+	.0000000+	.2354092+	.0000000+	40.0	1.000
1774.050+	.0000000+	.3000000+	.002183	2029.0	
.1412641+	.2277783+	.1063453-	.6232582+	.0001141+	
.0000000+	191.5715+	.0000000+	0000000+	.0021845+	
.0000000+	.0000000+	.1412641+	.0000000+	40.0	1.000

G.E.M.
FORCE

1775.050+	2.500000-	.3000000+	.002179	2029.0	
.0107821+	.2132484+	.1372321-	.0505613+	.0001142+	
.0000000+	191.7486+	.000000+	0000000+	.0021805+	
.0000000+	.0000000+	.0107821+	.0000000+	40.0	1.000
1779.050+	2.500000-	.3000000+	.002220	2026.2	
.3698870+	.2655811+	.0507196-	1.392745+	136.9475+	
.2581613+	95.43802+	1.430960+	1.432774+	.0021974+	
12.15388+	3.647468+	.2939901+	.2051893+	10.0	1.010
1780.050+	.0000000+	.3000000+	.002218	2026.2	
.4481324+	.2909551+	.0102854-	1.340211+	136.9475+	
.2588788+	95.52767+	1.433590+	1.731050+	.0021860+	
12.21727+	3.657604+	.3559773+	.2056423+	10.0	1.010
1781.050+	2.500000+	.3000000+	.002218	2026.2	
.5548305+	.3180207+	.0445551+	1.744636+	136.9475+	
.2468379+	95.52767+	1.433590+	2.247752+	.0021860+	
11.64902+	3.487483+	.4449901+	.1979711+	10.0	1.010
1782.050+	2.500000+	.3000000+	.002210	2026.2	
.4481324+	.2943383+	.0085380-	1.522507+	136.9475+	
.1294394+	135.2302+	1.012690+	3.462101+	.0021845+	
12.22578+	3.657604+	.3967741+	.1146050+	20.0	1.010
1783.050+	.0000000+	.3000000+	.002205	2026.2	
.3663304+	.2621979+	.0505100-	1.397152+	130.1001+	
.1258271+	135.3568+	.9611641+	2.911378+	.0021845+	
12.51010+	3.55553+	.3253878+	.1117641+	20.0	1.009
1784.050+	2.500000-	.3000000+	.002203	2026.2	
.2596322+	.2410529+	.0736371-	1.077075+	130.2201+	
.1316678+	135.4832+	.9611525+	1.971872+	.0021805+	
13.10288+	3.720574+	.2294244+	.1163485+	20.0	1.009
1785.050+	2.500000-	.3000000+	.002187	2026.2	
.1761081+	.2316245+	.1105341-	.760317+	130.1001+	
.0758575+	191.3316+	.6799711+	2.32156+	.0021815+	
14.94767+	4.242396+	.1636909+	.0705088+	40.0	1.009
1786.050+	.0000000+	.3000000+	.002167	2026.2	
.2641622+	.2423083+	.0783684-	1.090190+	136.9475+	
.0768081+	192.2154+	.7124689+	3.439249+	.0021822+	
14.37322+	4.295559+	.2453197+	.0713294+	40.0	1.010
1787.050+	2.500000-	.3000000+	.002162	2026.2	
.3701865+	.2709488+	.6557750-	1.366980+	136.9475+	
.0714847+	192.3917+	.7118161+	5.178537+	.0021830+	
13.37239+	3.997847+	.3474893+	.0667156+	40.0	1.010

G.EM
FORCE

1791.050+	2.500000-	.3000000+	.002219	2024.8	
.3414342+	.3044879+	.0748490-	1.121338+	302.1445+	
1.208732+	95.46635+	3.164932+	.2824730+	.0021413+	
26.39549+	17.07773+	.1545838+	.5472515+	10.0	1.049
1792.050+	.0000000+	.3000000+	.002219	2024.8	
.4552456+	.3450863+	.0216953-	1.319222+	302.6817+	
1.184268+	95.46635+	3.170559+	.3844109+	.0021322+	
25.92502+	16.73209+	.2084201+	.5421807+	10.0	1.049
1793.050+	2.500000+	.3000000+	.002217	2024.8	
.5192645+	.4262831+	.0955127+	1.218121+	302.4132+	
1.136686+	95.55603+	3.164774+	.4568228+	.0021353+	
24.86987+	16.05983+	.2430232+	.5319856+	10.0	1.049
1794.050+	2.500000+	.3000000+	.002203	2024.8	
.4765852+	.3603107+	.0880161-	1.322706+	302.6817+	
.5921341+	135.5235+	2.233425+	.8048603+	.0021315+	
25.93392+	16.73209+	.2993373+	.3719122+	20.0	1.049
1795.050+	.0000000+	.3000000+	.002196	2024.8	
.3592172+	.3205581+	.0400379-	1.120599+	302.6817+	
.5987873+	135.7761+	2.229270+	.5999079+	.0021315+	
26.22531+	16.92009+	.2246810+	.3745259+	20.0	1.049
1796.050+	2.500000-	.3000000+	.002196	2024.8	
.2667454+	.2934925+	.0684006-	.9088661+	300.3534+	
.6073052+	135.7761+	2.212122+	.4391701+	.0021330+	
26.78971+	17.16305+	.1659499+	.3778716+	20.0	1.048
1797.050+	2.500000-	.3000000+	.002180	2024.8	
.2210337+	.2867528+	.0604677-	.7708160+	302.6817+	
.3176724+	191.7425+	1.578583+	.6957913+	.0021344+	
27.49882+	17.76610+	.1677455+	.2410860+	40.0	1.049
1798.050+	.0000000+	.3000000+	.002157	2024.8	
.3216669+	.2948725+	.0438374-	1.090867+	300.6195+	
.3054919+	192.6249+	1.560646+	1.052947+	.0021270+	
26.71885+	17.08490+	.2463952+	.2340052+	40.0	1.048
1799.050+	2.500000+	.3000000+	.002150	2024.8	
.4366763+	.3162401+	.0578027-	1.380837+	303.2179+	
.3081324+	192.9768+	1.571266+	1.417170+	.0021232+	
26.76614+	17.23257+	.3338166+	.2355514+	40.0	1.049

G.E.M.
FORCE

1800.050+	2.500000+	.2500000+	.002195	2024.8	
.2276228+	.2706559+	.0068920+	.8410041+	.0001137+	
.0000000+	96.01324+	.0000011+	0000000+	.0021962+	
.0000000+	.0000000+	.2276228+	.0000000+	10.0	1.000
1801.050+	.0000000+	.2500000+	.002195	2024.8	
.1138114+	.2402071+	.0541686-	.4738051+	.0001137+	
.0000000+	96.01324+	.0000011+	0000000+	.0021962+	
.0000000+	.0000000+	.1138114+	.0000000+	10.0	1.000
1802.050+	2.500000-	.2500000+	.002195	2024.8	
.0284528+	.2080667+	.1376129-	.1367486+	.0001137+	
.0000000+	96.01324+	.0000011+	0000000+	.0021962+	
.0000000+	.0000000+	.0284528+	.0000000+	10.0	1.000
1803.050+	2.500000-	.2500000+	.002191	2024.8	
.0071132+	.1987629+	.1317520-	.0357874+	.0001138+	
.0000000+	135.9164+	.0000008+	0000000+	.0021921+	
.0000000+	.0000000+	.0071132+	.0000000+	20.0	1.000
1804.050+	.0000000+	.2500000+	.002186	2024.8	
.1422642+	.2232911+	.0909729-	.6371243+	.0001139+	
.0000000+	136.0425+	.0000008+	0000000+	.0021880+	
.0000000+	.0000000+	.1422642+	.0000000+	20.0	1.000
1805.050+	2.500000+	.2500000+	.002186	2024.8	
.2311794+	.2562773+	.0333249-	.9020671+	.0001139+	
.0000000+	136.0425+	.0000008+	0000000+	.0021880+	
.0000000+	.0000000+	.2311794+	.0000000+	20.0	1.000
1806.050+	2.500000+	.2500000+	.002161	2024.8	
.2390039+	.2529921+	.0488592-	.9447090+	.0001145+	
.0000000+	192.4690+	.0000005+	0000000+	.0021640+	
.0000000+	.0000000+	.2390039+	.0000000+	40.0	1.000
1807.050+	.0000000+	.2500000+	.002154	2024.8	
.1455587+	.2350433+	.0959106-	.6192848+	.0001147+	
.0000000+	192.8211+	.0000005+	0000000+	.0021561+	
.0000000+	.0000000+	.1455587+	.0000000+	40.0	1.000
1808.050+	2.500000-	.2500000+	.002145	2024.8	
.0017970+	.2153851+	.1323599-	.0083482+	.0001149+	
.0000000+	193.1727+	.0000005+	0000000+	.0021482+	
.0000000+	.0000000+	.0017970+	.0000000+	40.0	1.000

G.E.M.
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1812.050+	2.500000-	.2500000+	.002191	2019.8	
.3698870+	.2554315+	.0778541-	1.446086+	137.1999+	
.2581497+	96.12581+	1.427295+	1.432839+	.0021704+	
12.24797+	3.647303+	.2939928+	.2051820+	10.0	1.010
1813.050+	.0000000+	.2500000+	.002191	2019.8	
.4908116+	.2723475+	.0849962-	1.802151+	137.4519+	
.2583216+	96.12581+	1.429917+	1.900001+	.0021632+	
12.27435+	3.649733+	.3900526+	.2052906+	10.0	1.010
1814.050+	2.500000+	.2500000+	.002186	2019.8	
.5690570+	.3214039+	.0245934+	1.770535+	137.5777+	
.2449498+	96.21510+	1.429897+	2.323157+	.0021593+	
11.64963+	3.460806+	.4570923+	.1967547+	10.0	1.010
1815.050+	2.500000+	.2500000+	.002167	2019.8	
.4659154+	.3011047+	.0267073-	1.547353+	137.5777+	
.1291278+	136.7055+	1.006360+	3.608171+	.0021585+	
12.28674+	3.648801+	.4126330+	.1143607+	20.0	1.010
1816.050+	.0000000+	.2500000+	.002167	2019.8	
.3485474+	.2740391+	.0532207-	1.271889+	130.6988+	
.1225278+	136.7055+	.9560611+	2.844638+	.0021578+	
12.27665+	3.462302+	.3105022+	.1091534+	20.0	1.009
1817.050+	2.500000-	.2500000+	.002160	2019.8	
.2525190+	.2512025+	.0947821-	1.005240+	130.8182+	
.1309787+	136.8311+	.9560563+	1.927939+	.0021531+	
13.13997+	3.701101+	.2232748+	.1158100+	20.0	1.009
1818.050+	2.500000-	.2500000+	.002140	2019.8	
.1725141+	.2414536+	.1132610-	.7144814+	137.5777+	
.0793007+	193.3992+	.7113664+	2.175442+	.0021547+	
14.96015+	4.434959+	.1598387+	.0734741+	40.0	1.010
1819.050+	.0000000+	.2500000+	.002133	2019.8	
.2893305+	.2512827+	.0844622-	1.151374+	137.5777+	
.0767795+	193.7506+	.7100765+	3.768196+	.0021555+	
14.47947+	4.293964+	.2686906+	.0713048+	40.0	1.010
1820.050+	2.500000+	.2500000+	.002131	2019.8	
.3935478+	.2854708+	.0432750-	1.378592+	143.3101+	
.0758405+	193.9260+	.7388939+	5.189149+	.0021563+	
13.72548+	4.241446+	.3655050+	.0704942+	40.0	1.011

G. E. M.
FORCE

1821.050+	2.500000+	.2500000+	.002117	2019.8	
.4618346+	.3324795+	.0214202-	1.389062+	302.6817+	
.3005281+	194.4308+	1.556757+	1.536743+	.0021249+	
26.13121+	16.80729+	.3551131+	.2310816+	40.0	1.049
1822.050+	.0000000+	.2500000+	.002117	2019.8	
.3486223+	.3042742+	.0530059-	1.145750+	303.2179+	
.3076273+	194.4308+	1.559515+	1.133261+	.0021189+	
26.77743+	17.20432+	.2666067+	.2352561+	40.0	1.049
1823.050+	2.500000-	.2500000+	.002110	2019.8	
.2443950+	.2923084+	.0661358-	.8360860+	303.7531+	
.3162667+	194.7802+	1.559465+	.7727495+	.0021129+	
27.55908+	17.68749+	.1856728+	.2402756+	40.0	1.049
1824.050+	2.500000-	.2500000+	.002127	2019.8	
.3094247+	.3281703+	.0017529-	.9428784+	304.0204+	
.6091206+	137.9490+	2.203860+	.5079859+	.0021091+	
26.84195+	17.21208+	.1922943+	.3785425+	20.0	1.049
1825.050+	.0000000+	.2500000+	.002134	2019.8	
.3983399+	.3501611+	.0042333+	1.137590+	304.0204+	
.5990967+	137.6998+	2.207848+	.6649008+	.0021084+	
26.40931+	16.92884+	.2491050+	.3746469+	20.0	1.049
1826.050+	2.500000+	.2500000+	.002134	2019.8	
.5263777+	.3797641+	.0168705+	1.386064+	304.2874+	
.5879180+	137.6998+	2.209788+	.8953249+	.0021033+	
25.95716+	16.61296+	.3314892+	.3702445+	20.0	1.049
1827.050+	2.500000+	.2500000+	.002141	2019.8	
.6188495+	.4228999+	.0162881+	1.463347+	304.2874+	
1.171154+	97.18653+	3.130953+	.5284899+	.0021033+	
25.85388+	16.54681+	.2899324+	.5394154+	10.0	1.049
1828.050+	.0000000+	.2500000+	.002145	2019.8	
.4765852+	.37 1519+	.0030668-	1.280620+	304.2874+	
1.182524+	97.09844+	3.133803+	.4030235+	.0021040+	
26.09583+	16.70746+	.2183642+	.5418150+	10.0	1.049
1829.050+	2.500000-	.2500000+	.002145	2019.8	
.3556606+	.3298619+	.2323976-	1.078210+	304.2874+	
1.207272+	97.09844+	3.133803+	.2945985+	.0021054+	
26.62363+	17.05710+	.1611313+	.5469520+	10.0	1.049

G.E.M.
FORCE

1833.050+	5.000000+	.1500000+	.002254	2023.4	
.3343210+	.3264787+	.0940797+	1.024020+	.0001123+	
.0000000+	94.78392+	.0000011+	0000000+	.0022533+	
.0000000+	.0000000+	.3343210+	.0000000+	10.0	1.000
1834.050+	2.500000+	.1500000+	.002249	2023.4	
.2205095+	.2791139+	.0155361+	.7900342+	.0001123+	
.0000000+	94.87432+	.0000011+	0000000+	.0022490+	
.0000000+	.0000000+	.2205095+	.0000000+	10.0	1.000
1835.050+	.0000000+	.1500000+	.002242	2023.4	
.0711321+	.2418987+	.0319797-	.2940574+	.0001124+	
.0000000+	94.96463+	.0000011+	0000000+	.0022447+	
.0000000+	.0000000+	.0711321+	.0000000+	10.0	1.000
1836.050+	2.500000-	.1500000+	.002240	2023.4	
.1778303-	.2469732+	.0590523-	.7200376-	.0001125+	
.0000000+	95.05486+	.0000011+	0000000+	.0022404+	
.0000000+	.0000000+	.1778303-	.0000000+	10.0	1.000
1837.050+	5.000000-	.1500000+	.002240	2023.4	
.1493774-	.2300575+	.1129476-	.6493047-	.0001125+	
.0000000+	95.05486+	.0000011+	0000000+	.0022404+	
.0000000+	.0000000+	.1493774-	.0000000+	10.0	1.000
1838.050+	5.000000-	.1500000+	.002230	2023.4	
.1564906-	.2232911+	.1388647-	.7008368-	.0001127+	
.0000000+	134.6968+	.0000008+	0000000+	.0022320+	
.0000000+	.0000000+	.1564906-	.0000000+	20.0	1.000
1839.050+	2.500000-	.1500000+	.002225	2023.4	
.0995849-	.2139673+	.1122218-	.4653778-	.0001128+	
.0000000+	134.8240+	.0000008+	0000000+	.0022278+	
.0000000+	.0000000+	.0995849-	.0000000+	20.0	1.000
1840.050+	.0000000+	.1500000+	.002221	2023.4	
.0995849+	.2249827+	.0687840-	.4426337+	.0001129+	
.0000000+	134.9512+	.0000008+	0000000+	.0022236+	
.0000000+	.0000000+	.0995849+	.0000000+	20.0	1.000
1841.050+	2.500000+	.1500000+	.002221	2023.4	
.2525190+	.2588147+	.0185838-	.9756747+	.0001129+	
.0000000+	134.9512+	.0000008+	0000000+	.0022236+	
.0000000+	.0000000+	.2525190+	.0000000+	20.0	1.000

G.E.M.
FORCE

1842.050+	5.000000+	.1500000+	.002216	2023.4	
.3556606+	.3112543+	.0624304+	1.142668+	.0001130+	
.0000000+	135.0782+	.0000008+	0000000+	.0022194+	
.0000000+	.0000000+	.3556606+	.0000000+	20.0	1.000
1843.050+	5.000000+	.1500000+	.002194	2023.4	
.3701865+	.3115392+	.0229626+	1.188250+	.0001137+	
.0000000+	191.1205+	.0000005+	0000000+	.0021946+	
.0000000+	.0000000+	.3701865+	.0000000+	40.0	1.000
1844.050+	2.500000+	.1500000+	.002184	2023.4	
.2533801+	.2598297+	.0495629-	.9751775+	.0001139+	
.0000000+	191.4754+	.0000005+	0000000+	.0021865+	
.0000000+	.0000000+	.2533801+	.0000000+	40.0	1.000
1845.050+	.0000000+	.1500000+	.002171	2023.4	
.1132123+	.2346159+	.1087461-	.4825433+	.0001143+	
.0000000+	192.1833+	.0000005+	0000000+	.0021704+	
.0000000+	.0000000+	.1132123+	.0000000+	40.0	1.000
1846.050+	2.500000-	.1500000+	.002164	2023.4	
.0898511-	.2329065+	.1511375-	.3857817-	.0001144+	
.0000000+	192.3599+	.0000005+	0000000+	.0021664+	
.0000000+	.0000000+	.0898511-	.0000000+	40.0	1.000
1847.050+	5.000000-	.1500000+	.002164	2023.4	
.1832962-	.2470091+	.1750224-	.7420625-	.0001144+	
.0000000+	192.3599+	.0000005+	0000000+	.0021664+	
.0000000+	.0000000+	.1832962-	.0000000+	40.0	1.000
1853.050+	5.000000-	.1500000+	.002222	2027.6	
.4196795+	.2537399+	.0605239-	1.653974+	128.4088+	
.2455603+	95.40472+	1.345938+	1.709068+	.0022448+	
12.03589+	3.469432+	.3369403+	.1971484+	10.0	1.009
1854.050+	2.500000-	.1500000+	.002222	2027.6	
.5263777+	.2740391+	.0266952-	1.920812+	135.2952+	
.2587292+	95.40472+	1.418118+	2.034473+	.0022413+	
12.05449+	3.655491+	.4181818+	.2055479+	10.0	1.010
1855.050+	.0000000+	.1500000+	.002222	2027.6	
.6473023+	.2960299+	.0005598-	2.186610+	135.2952+	
.2527814+	95.40472+	1.418118+	2.560719+	.0022413+	
11.77737+	3.571457+	.5166921+	.2017761+	10.0	1.010

G.E.M.
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1856.050+	2.500000+	.1500000+	.002220	2027.6	
.7255477+	.3332451+	.0635029+	2.177218+	135.2952+	
.2408858+	95.49434+	1.416787+	3.011998+	.0022421+	
11.21924+	3.403388+	.5847014+	.1941240+	10.0	1.010
1857.050+	5.000000+	.1500000+	.002220	2027.6	
.8393591+	.3806099+	.1201456+	2.205299+	135.4230+	
.2321832+	95.49434+	1.418126+	3.615071+	.0022379+	
10.82413+	3.280433+	.6811966+	.1884324+	10.0	1.010
1858.050+	5.000000+	.1500000+	.002219	2027.6	
.7219910+	.3831473+	.0891859+	1.884369+	135.4230+	
.1160916+	135.1831+	1.001774+	6.219147+	.0022379+	
10.82413+	3.280433+	.6468923+	.1040162+	20.0	1.010
1859.050+	2.500000+	.1500000+	.002207	2027.6	
.5726136+	.3247871+	.0241965+	1.763042+	128.6518+	
.1131149+	4.278865+	30.06681+	5.062228+	.0022363+	
11.10941+	3.196319+	.5144245+	.1016201+	20.0	1.009
1860.050+	.0000000+	.1500000+	.002201	2027.6	
.4481324+	.2875719+	.0207883-	1.558331+	135.4230+	
.1294868+	135.5622+	.9989725+	3.460833+	.0022363+	
12.08148+	3.658944+	.3967575+	.1146421+	20.0	1.010
1861.050+	2.500000-	.1500000+	.002201	2027.6	
.3129813+	.2698101+	.0427477-	1.160005+	128.6518+	
.1258403+	135.5622+	.9490239+	2.487130+	.0022355+	
12.36352+	3.555905+	.2779979+	.1117746+	20.0	1.009
1862.050+	5.000000-	.1500000+	.002201	2027.6	
.2240662+	.2596605+	.0732895-	.8629196+	128.6518+	
.1314961+	135.5622+	.9490239+	1.703975+	.0022348+	
12.92369+	3.715721+	.1980264+	.1162143+	20.0	1.009
1863.050+	5.000000-	.1500000+	.002182	2027.6	
.1329796+	.2670947+	.1050069-	.4978744+	128.5304+	
.0777972+	191.6187+	.6707611+	1.709311+	.0022366+	
15.13436+	4.350875+	.1233809+	.0721816+	40.0	1.009
1864.050+	2.500000-	.1500000+	.002176	2027.6	
.2372069+	.2675220+	.0205765+	.8866817+	140.9325+	
.0845213+	191.9719+	.7341305+	2.806473+	.0022382+	
14.98506+	4.726928+	.2187203+	.0779342+	40.0	1.011

G.E.M.
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1865.050+	.0000000+	.1500000+	.002169	2027.6	
.3665925+	.2752143+	.0544655-	1.332025+	140.9325+	
.0774779+	192.1483+	.7334566+	4.731575+	.0022382+	
13.73630+	4.333017+	.3402320+	.0719067+	40.0	1.011
1866.050+	2.500000+	.1500000+	.002164	2027.6	
.4959781+	.3072657+	.0206752-	1.614166+	135.4230+	
.0669289+	192.3245+	.7041379+	7.410517+	.0022348+	
12.36783+	3.743058+	.4648651+	.0627304+	40.0	1.010
1867.050+	5.000000+	.1500000+	.002157	2027.6	
.6577101+	.3628214+	.0378500+	1.812765+	141.0656+	
.0665842+	192.6764+	.7321373+	9.877859+	.0022371+	
11.79964+	3.723782+	.6166508+	.0624275+	40.0	1.011
1873.050+	5.000000-	.1500000+	.002227	2032.6	
.5263777+	.1590103+	.1560919-	3.310335+	299.4443+	
1.230840+	95.28182+	3.142723+	.4276572+	.0021913+	
26.50174+	17.39009+	.2359549+	.5517383+	10.0	1.049
1874.050+	2.500000-	.1500000+	.002225	2032.6	
.6473023+	.1996087+	.1463428-	3.242855+	297.1409+	
1.177611+	95.37133+	3.115621+	.5496738+	.0021861+	
25.61339+	16.63804+	.2972533+	.5407813+	10.0	1.048
1875.050+	.0000000+	.1500000+	.002225	2032.6	
.7753401+	.2520483+	.1266102-	3.076156+	299.9863+	
1.182294+	95.37133+	3.145456+	.6557927+	.0021789+	
25.55487+	16.70421+	.3552866+	.5417667+	10.0	1.049
1876.050+	2.500000+	.1500000+	.002218	2032.6	
.9176044+	.3044879+	.1458046-	3.013598+	299.9863+	
1.173063+	95.46075+	3.142509+	.7822294+	.0021782+	
25.36401+	16.57378+	.4222631+	.5398200+	10.0	1.049
1877.050+	5.000000+	.1500000+	.002218	2032.6	
1.123887+	.3569275+	.1685028-	3.148783+	299.9863+	
1.167128+	95.46075+	3.142509+	.9629510+	.0021767+	
25.25297+	16.48993+	.5186068+	.5385598+	10.0	1.049
1878.050+	5.000000+	.1500000+	.002211	2032.6	
.8713685+	.3831473+	.0445540-	2.274236+	298.2156+	
.5791363+	135.2638+	2.204695+	1.504600+	.0021696+	
25.29252+	16.36431+	.5518007+	.3667424+	20.0	1.048

G.E.M.
FORCE

1879.050+	2.500000+	.1500000+	.002206	2032.6	
.7006514+	.3493153+	.0446263-	2.005784+	297.2473+	
.5805800+	135.3200+	2.200659+	1.206812+	.0021735+	
25.33276+	16.40560+	.4432875+	.3673208+	20.0	1.048
1880.050+	.0000000+	.1500000+	.002206	2032.6	
.5868400+	.3222497+	.0601406-	1.811072+	294.7828+	
.5815966+	135.3200+	2.175070+	1.009015+	.0021735+	
25.67567+	16.43433+	.3710427+	.3677275+	20.0	1.047
1881.050+	2.500000-	.1500000+	.002204	2032.6	
.4659154+	.3011047+	.0683191-	1.547353+	297.2473+	
.6057941+	135.5160+	2.198613+	.7690985+	.0021765+	
26.39682+	17.11809+	.2901464+	.3772551+	20.0	1.048
1882.050+	5.000000-	.1500000+	.002120	2032.6	
.4018965+	.2757307+	.0625686-	1.457568+	297.2473+	
.6202022+	135.6418+	2.136573+	.6480087+	.0021787+	
26.99696+	17.52522+	.2480533+	.3827931+	20.0	1.048
1883.050+	5.000000-	.1500000+	.002173	2032.6	
.3288550+	.3025648+	.0652237-	1.086891+	299.2863+	
.3236725+	191.8940+	1.563791+	1.016011+	.0021834+	
27.63607+	18.10166+	.2484414+	.2445261+	40.0	1.049
1884.050+	2.500000-	.1500000+	.002169	2032.6	
.3971419+	.3064110+	.0567728-	1.236108+	300.2570+	
.3144606+	192.0700+	1.563268+	1.262930+	.0021757+	
26.91968+	17.58648+	.3021329+	.2392317+	40.0	1.049
1885.050+	.0000000+	.1500000+	.002162	2032.6	
.4923840+	.3145307+	.0424295-	1.565456+	297.2473+	
.2997983+	192.4215+	1.548409+	1.642384+	.0021728+	
25.89885+	16.76647+	.3788157+	.2306498+	40.0	1.048
1886.050+	2.500000+	.1500000+	.002153	2032.6	
.6199726+	.3440179+	.0254779-	1.802151+	298.2156+	
.2946034+	192.7723+	1.546083+	2.104430+	.0021689+	
25.47300+	16.47595+	.4786899+	.2275627+	40.0	1.048
1887.050+	5.000000+	.1500000+	.002151	2032.6	
.7727195+	.3803428+	.0046562-	2.031639+	298.4836+	
.2928792+	192.9474+	1.546968+	2.630354+	.0021650+	
25.34668+	16.37952+	.5976733+	.2265325+	40.0	1.048

G.E.M.
FORCE

1888.050+	5.000000+	.1000000+	.002224	2029.7	
.4908116+	.3467779+	.0716477+	1.415348+	.0000000+	
.0000000+	95.35484+	.0000000+	0000000+	.0022264+	
.0000000+	.0000000+	.4908116+	.0000000+	10.0	1.000
1889.050+	2.500000+	.1000000+	.002222	2029.7	
.3058681+	.2892635+	.0175580+	1.057402+	.0000000+	
.0000000+	95.44441+	.0000000+	0000000+	.0022222+	
.0000000+	.0000000+	.3058681+	.0000000+	10.0	1.000
1890.050+	.0000000+	.1000000+	.002215	2029.7	
.0853585+	.2537399+	.0694810-	.3364016+	.0000000+	
.0000000+	95.53391+	.0000000+	0000000+	.0022180+	
.0000000+	.0000000+	.0853585+	.0000000+	10.0	1.000
1891.050+	2.500000	.1000000+	.002215	2029.7	
.1707171-	.2588147+	.1097915-	.6596111-	.0000000+	
.0000000+	95.53391+	.0000000+	0000000+	.0022180+	
.0000000+	.0000000+	.1707171-	.0000000+	10.0	1.000
1892.050+	5.000000-	.1000000+	.002210	2029.7	
.1778303-	.2706559+	.1344444-	.6570345-	.0000000+	
.0000000+	95.62332+	.0000000+	0000000+	.0022139+	
.0000000+	.0000000+	.1778303-	.0000000+	10.0	1.000
1893.050+	5.000000-	.1000000+	.002207	2029.7	
.1849435-	.2486651+	.1327406-	.7437451-	.0000000+	
.0000000+	135.3722+	.0000000+	0000000+	.0022097+	
.0000000+	.0000000+	.1849435-	.0000000+	20.0	1.000
1894.050+	2.500000-	.1000000+	.002203	2029.7	
.1387076-	.2359781+	.1342694-	.5877986-	.0000000+	
.0000000+	135.4984+	.0000000+	0000000+	.0022056+	
.0000000+	.0000000+	.1387076-	.0000000+	20.0	1.000
1895.050+	.0000000+	.1000000+	.002200	2029.7	
.0995849+	.2402071+	.1003553-	.4145795+	.0000000+	
.0000000+	135.6246+	.0000000+	0000000+	.0022015+	
.0000000+	.0000000+	.0995849+	.0000000+	20.0	1.000
1896.050+	2.500000+	.1000000+	.002196	2029.7	
.3165379+	.2757307+	.0243154-	1.147996+	.0000000+	
.0000000+	135.7505+	.0000000+	0000000+	.0021974+	
.0000000+	.0000000+	.3165379+	.0000000+	20.0	1.000

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FORCE

1897.050+	5.000000+	.1000000+	.002196	2029.7	
.4908116+	.3298619+	.0519746+	1.487930+	.0000000+	
.0000000+	135.7505+	.0000000+	0000000+	.0021974+	
.0000000+	.0000000+	.4908116+	.0000000+	20.0	1.000
1898.050+	5.000000+	.1000000+	.002177	2029.7	
.5013691+	.3239324+	.0388950+	1.547758+	.0000000+	
.0000000+	191.8816+	.0000000+	0000000+	.0021772+	
.0000000+	.0000000+	.5013691+	.0000000+	40.0	1.000
1899.050+	2.500000+	.1000000+	.002166	2029.7	
.3252610+	.2700861+	.0344377-	1.204286+	.0000000+	
.0000000+	192.2340+	.0000000+	0000000+	.0021693+	
.0000000+	.0000000+	.3252610+	.0000000+	40.0	1.000
1900.050+	.0000000+	.1000000+	.002159	2029.7	
.1078213+	.2393168+	.1030762-	.4505379+	.0000000+	
.0000000+	192.5857+	.0000000+	0000000+	.0021614+	
.0000000+	.0000000+	.1078213+	.0000000+	40.0	1.000
1901.050+	2.500000-	.1000000+	.002155	2029.7	
.1347766-	.2418809+	.1393789-	.5572024-	.0000000+	
.0000000+	192.7614+	.0000000+	0000000+	.0021574+	
.0000000+	.0000000+	.1347766-	.0000000+	40.0	1.000
1902.050+	5.000000-	.1000000+	.002150	2029.7	
.1940783-	.2675220+	.1502072-	.7254668-	.0000000+	
.0000000+	192.9368+	.0000000+	0000000+	.0021535+	
.0000000+	.0000000+	.1940783-	.0000000+	40.0	1.000
1908.050+	5.000000-	.1000000+	.002204	2030.4	
.5548305+	.2537399+	.0367728-	2.186610+	136.1874+	
.2595373+	95.78520+	1.421800+	2.137767+	.0022151+	
12.15456+	3.666909+	.4405034+	.2060577+	10.0	1.010
1909.050+	2.500000-	.1000000+	.002204	2030.4	
.6401891+	.2774223+	.0116488+	2.307633+	136.3143+	
.2528878+	95.78520+	1.423125+	2.531513+	.0022110+	
11.85458+	3.572960+	.5109708+	.2018439+	10.0	1.010
1910.050+	.0000000+	.1000000+	.002202	2030.4	
.7611137+	.2960239+	.0053784+	2.571069+	136.3143+	
.2462960+	95.87434+	1.421802+	3.090239+	.0022118+	
11.54157+	3.479826+	.6107006+	.1976224+	10.0	1.010

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1911.050+ .8606987+ .2322133+ 10.88165+	2.500000+ .3298619+ 95.87434+ 3.280858+	.1000000+ .0636086+ 1.421802+ .6984981+	.002202 2.609269+ 3.706499+ .1584522+	2030.4 136.3143+ .0022118+ 10.0	1.010
1912.050+ 1.010076+ .2361783+ 10.54657+	5.000000+ .3738435+ 95.87434+ 3.336878+	.1000000+ .1277540+ 1.494282+ .8170958+	.002202 2.701868+ 4.276751+ .1910552+	2030.4 143.2633+ .0022084+ 10.0	1.011
1913.050+ .9425006+ .1041651+ 9.777238+	5.000000+ .3975259+ 135.8456+ 2.943422+	.1000000+ .1215198+ 1.005317+ .8535867+	.002188 2.370916+ 9.048141+ .0943383+	2030.4 136.5679+ .0022043+ 20.0	1.010
1914.050+ .7219910+ .1067555+ 10.56489+	2.500000+ .3323993+ 136.0970+ 3.016621+	.1000000+ .0389271+ .9541714+ .6523491+	.002185 2.172059+ 6.763030+ .0964581+	2030.4 129.8598+ .0021987+ 20.0	1.009
1915.050+ .5477173+ .1101808+ 10.90766+	.0000000+ .3061795+ 136.0970+ 3.113411+	.1000000+ .0120708+ .9541714+ .4933586+	.002185 1.788876+ 4.971075+ .0992458+	2030.4 129.8598+ .0021980+ 20.0	1.009
1916.050+ .4303493+ .1168887+ 11.57575+	2.500000- .2884177+ 136.0970+ 3.302958+	.1000000+ .0030748- .9541714+ .3853108+	.002185 1.492104+ 3.681699+ .1046556+	2030.4 129.8598+ .0021972+ 20.0	1.009
1917.050+ .3449908+ .1231970+ 12.18917+	5.000000- .2774223+ 136.2225+ 3.481211+	.1000000+ .0449546- .9524093+ .3071507+	.002181 1.243558+ 2.800318+ .1096842+	2030.4 129.7395+ .0022013+ 20.0	1.009
1918.050+ .2587711+ .0744254+ 14.57565+	5.000000- .2713682+ 192.8931+ 4.162305+	.1000000+ .0734169- .6719738+ .2408461+	.002151 .9535795+ 3.476919+ .0692699+	2030.4 129.6191+ .0022031+ 40.0	1.009
1919.050+ .3414342+ .0797934+ 14.13374+	2.500000- .2777785+ 193.0684+ 4.462518+	.1000000+ .0568075- .7420337+ .3162032+	.002149 1.229159+ 4.278973+ .0738969+	2030.4 143.2633+ .0022038+ 40.0	1.011

G.E.M.
FORCE

1920.050+	.0000000+	.1000000+	.002144	2030.4	
.4780078+	.2905990+	.0273021-	1.644905+	136.5679+	
.070073+	193.2435+	.7067142+	6.821543+	.0022013+	
13.03564+	3.918907+	.4467057+	.0654845+	40.0	1.010
1921.050+	2.500000+	.1000000+	.002137	2030.4	
.6505220+	.3282059+	.0165827+	1.962054+	143.3963+	
.0671270+	193.5933+	.7407093+	9.690913+	.0022028+	
11.88464+	3.754135+	.6096013+	.0629044+	40.0	1.011
1922.050+	5.000000+	.1000000+	.002133	2030.4	
.8104570+	.3897446+	.0637013+	2.079456+	136.6946+	
.0526795+	193.7679+	.7054551+	15.38464+	.0022003+	
9.795378+	2.946151+	.7699990+	.0500433+	40.0	1.010
1928.050+	5.000000-	.1000000+	.002198	2035.4	
1.017189+	.0998043+	.1580009-	10.19183+	301.3370+	
1.212125+	95.92882+	3.141256+	.8391784+	.0021661+	
26.23689+	17.12567+	.4596245+	.5479460+	10.0	1.049
1929.050+	2.500000-	.1000000+	.002198	2035.4	
1.109661+	.1691599+	.1209723-	6.559832+	301.6064+	
1.173431+	95.92882+	3.144065+	.9456547+	.0021600+	
25.44808+	16.57898+	.5105572+	.5398981+	10.0	1.049
1930.050+	.0000000+	.1000000+	.002193	2035.4	
1.273265+	.2317491+	.0773985-	5.494151+	301.6064+	
1.153542+	96.01760+	3.141158+	1.103786+	.0021585+	
25.03384+	16.29798+	.5912420+	.5356489+	10.0	1.049
1931.050+	2.500000+	.1000000+	.002193	2035.4	
1.465321+	.2824971+	.1058439-	5.187031+	301.6064+	
1.133654+	96.01760+	3.141158+	1.292504+	.0021578+	
24.61062+	16.01699+	.6867662+	.5313205+	10.0	1.049
1932.050+	5.000000+	.1000000+	.002193	2035.4	
1.131000+	.2638895+	.1200156-	4.285886+	301.8756+	
1.167843+	96.01760+	3.143961+	.9684524+	.0021539+	
25.37547+	16.50003+	.5217170+	.5367120+	10.0	1.049
1933.050+	5.000000+	.1000000+	.002177	2035.4	
1.038529+	.3603107+	.0269914+	2.882314+	301.8756+	
.5673330+	136.2999+	2.214769+	1.830545+	.0021532+	
24.66300+	16.03128+	.6626090+	.3619735+	20.0	1.049

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1934.050+	2.500000+	.1000000+	.002173	2035.4	
.8998214+	.3146375+	.0488306-	2.859876+	301.8756+	
.5839217+	136.4249+	2.212760+	1.540996+	.0021539+	
25.37547+	16.50003+	.5680971+	.3686556+	20.0	1.049

1935.050+	.0000000+	.1000000+	.002173	2035.4	
.7646703+	.2824971+	.0300221-	2.700224+	301.8756+	
.5872394+	136.4249+	2.212760+	1.302144+	.0021539+	
25.51965+	16.59376+	.4817611+	.3699753+	20.0	1.049

1936.050+	2.500000-	.1000000+	.002173	2035.4	
.6508589+	.2562773+	.0604309-	2.539666+	299.5535+	
.5925988+	136.4249+	2.195731+	1.098312+	.0021547+	
25.94332+	16.74522+	.4086772+	.3720954+	20.0	1.048

1937.050+	5.000000-	.1000000+	.002168	2035.4	
.6046230+	.2114499+	.0907490-	2.859414+	301.8756+	
.6170990+	136.5498+	2.210736+	.9797826+	.0021576+	
26.77154+	17.45753+	.3738936+	.3816087+	20.0	1.049

1938.050+	5.000000-	.1000000+	.002154	2035.4	
.4636317+	.2897443+	.0622434-	1.600140+	301.8756+	
.3168264+	192.8133+	1.565636+	1.463361+	.0021576+	
27.20334+	17.71878+	.3220826+	.2405984+	40.0	1.049

1939.050+	2.500000-	.1000000+	.002143	2035.4	
.5157453+	.3055563+	.0279255-	1.617889+	305.3588+	
.3120037+	193.3375+	1.579408+	1.653010+	.0021569+	
26.49270+	17.44907+	.3930974+	.2378070+	40.0	1.050

1940.050+	.0000000+	.1000000+	.002138	2035.4	
.6343488+	.3170946+	.0181389-	2.000501+	299.5535+	
.2927646+	193.5119+	1.547984+	2.166753+	.0021525+	
25.39281+	16.37311+	.4906916+	.2264639+	40.0	1.048

1941.050+	2.500000+	.1000000+	.002134	2035.4	
.7888927+	.3448726+	.0082593+	2.287489+	299.5535+	
.2861108+	193.6861+	1.546592+	2.757297+	.0021532+	
24.80722+	16.00099+	.6133940+	.2224620+	40.0	1.048

1942.050+	5.000000+	.1000000+	.002132	2035.4	
.9218723+	.3829069+	.0617825+	2.407562+	301.8756+	
.2816234+	193.860+	1.557181+	3.273421+	.0021532+	
24.23031+	15.75003+	.7193004+	.2197336+	40.0	1.049

G.E.M.
FORCE

1943.050+	2.500000+	.0500000+	.002313	2046.0	
.5050381+	.3044879+	.0412755+	1.658647+	.0000000+	
.0000000+	93.44522+	.0000000+	0000000+	.0023191+	1.000
.0000000+	.0000000+	.5050381+	.0000000+	10.0	
1944.050+	.0000000+	.0500000+	.002306	2046.0	
.0995849+	.2503567+	.0272288-	.3977722+	.0000000+	
.0000000+	93.62649+	.0000000+	0000000+	.0023101+	1.000
.0000000+	.0000000+	.0995849+	.0000000+	10.0	
1945.050+	2.500000-	.0500000+	.002306	2046.0	
.1066981-	.2503567+	.0475736-	.4261845-	.0000000+	
.0000000+	93.62649+	.0000000+	0000000+	.0023101+	1.000
.0000000+	.0000000+	.1066981-	.0000000+	10.0	
1946.050+	2.500000-	.0500000+	.002290	2046.0	
.0675755-	.2359781+	.0851135-	.2863634-	.0000000+	
.0000000+	132.9328+	.0000000+	0000000+	.0022924+	1.000
.0000000+	.0000000+	.0675755-	.0000000+	20.0	
1947.050+	.0000000+	.0500000+	.002288	2046.0	
.1387076+	.2368239+	.0577624-	.5856993+	.0000000+	
.0000000+	133.0603+	.0000000+	0000000+	.0022880+	1.000
.0000000+	.0000000+	.1387076+	.0000000+	20.0	
1948.050+	2.500000+	.0500000+	.002274	2046.0	
.5512739+	.2985673+	.0322853+	1.846397+	.0000000+	
.0000000+	133.4421+	.0000000+	0000000+	.0022749+	1.000
.0000000+	.0000000+	.5512739+	.0000000+	20.0	
1949.050+	2.500000+	.0500000+	.002245	2046.0	
.5804381+	.3038469+	.0057898-	1.910297+	.0000000+	
.0000000+	188.8293+	.0000000+	0000000+	.0022492+	1.000
.0000000+	.0000000+	.5804381+	.0000000+	40.0	
1950.050+	.0000000+	.0500000+	.002231	2046.0	
.1563409+	.2448724+	.0796289-	.6384586+	.0000000+	
.0000000+	189.3620+	.0000000+	0000000+	.0022366+	1.000
.0000000+	.0000000+	.1563409+	.0000000+	40.0	
1951.050+	2.500000-	.0500000+	.002227	2046.0	
.0323463-	.2555562+	.0933016-	.1265725-	.0000000+	
.0000000+	189.5392+	.0000000+	0000000+	.0022324+	1.000
.0000000+	.0000000+	.0323463-	.0000000+	40.0	

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1955.050+	2.500000-	.0500000+	.002288	2046.0	
.9318308+	.2740391+	.0971204+	3.400356+	141.0656+	
.2511598+	94.07814+	1.499451+	3.710111+	.0022597+	
11.13199+	3.548545+	.7447736+	.2007415+	10.0	1.011
1956.050+	.0000000+	.0500000+	.002288	2046.0	
1.052755+	.2892635+	.1197668+	3.639433+	146.8466+	
.2614525+	94.07814+	1.560900+	4.026564+	.0022562+	
11.14916+	3.693967+	.8345581+	.2072630+	10.0	1.012
1957.050+	2.500000+	.0500000+	.002288	2046.0	
1.059868+	.3298619+	.2021211+	3.213067+	135.5507+	
.2175046+	94.07814+	1.440831+	4.872855+	.0022554+	
10.05147+	3.073044+	.8705253+	.1786478+	10.0	1.010
1958.050+	2.500000+	.0500000+	.002267	2046.0	
.9567271+	.3620023+	.1340584+	2.642875+	135.6782+	
.1013988+	133.5622+	1.015842+	9.435283+	.0022520+	
9.377415+	2.865255+	.8686472+	.0920637+	20.0	1.010
1959.050+	.0000000+	.0500000+	.002265	2046.0	
.8144628+	.3154833+	.0752723+	2.581634+	141.3315+	
.118051+	133.6891+	1.057165+	6.899294+	.0022512+	
10.48425+	3.335775+	.7284671+	.1055857+	20.0	1.011
1960.050+	2.500000-	.0500000+	.002260	2046.0	
.7219910+	.2867261+	.0307067+	2.518050+	141.3315+	
.1335830+	133.8159+	1.056163+	5.404809+	.0022512+	
11.86375+	3.774693+	.6369106+	.1178414+	20.0	1.011
1961.050+	2.500000-	.0500000+	.002232	2046.0	
.5444977+	.2910264+	.0084663-	1.870956+	146.8466+	
.0750210+	189.3423+	.7755611+	7.257930+	.0022539+	
12.67634+	4.195617+	.5064995+	.0697856+	40.0	1.012
1962.050+	.0000000+	.0500000+	.002214	2046.0	
.6792743+	.3081204+	.0276443+	2.204574+	141.3315+	
.0596463+	190.2267+	.7429635+	11.38835+	.0022504+	
10.48786+	3.335775+	.6410387+	.0562889+	40.0	1.011
1963.050+	2.500000+	.0500000+	.002205	2046.0	
.8805408+	.3478641+	.0818772+	2.531277+	141.7294+	
.0487959+	190.5793+	.7436769+	18.04538+	.0022401+	
8.595250+	2.728952+	.8395731+	.0465256+	40.0	1.011

G.E.M.
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1967.050+	2.500000-	.0500000+	.002251	2042.4	
2.446945+	.0778135+	.2417509-	31.44624+	299.7155+	
1.087018+	94.78386+	3.162094+	2.251060+	.0021963+	
23.33073+	15.35809+	1.172459+	.5208476+	10.0	1.049
1968.050+	.0000000+	.0500000+	.002251	2042.4	
2.631888+	.1860759+	.1352123-	14.14416+	297.6787+	
1.053459+	94.78386+	3.140605+	2.498330+	.0021908+	
22.82181+	14.88393+	1.281685+	.5130168+	10.0	1.048
1969.050+	2.500000+	.0500000+	.002247	2042.4	
2.489624+	.2655811+	.1136844-	9.374250+	299.9863+	
1.066900+	94.87341+	3.161964+	2.333511+	.0021908+	
22.93522+	15.07384+	1.204520+	.5161837+	10.0	1.049
1970.050+	2.500000+	.0500000+	.002242	2042.4	
1.518670+	.2884177+	.0210272-	5.265524+	299.9863+	
.5387254+	134.3047+	2.233624+	2.819007+	.0021908+	
23.16202+	15.22291+	.9869668+	.3501114+	20.0	1.049
1971.050+	.0000000+	.0500000+	.002235	2042.4	
1.529340+	.2630437+	.0317749-	5.814016+	300.2570+	
.5385514+	134.5574+	2.231440+	2.839730+	.0021861+	
23.18331+	15.21799+	.9940134+	.3500379+	20.0	1.049
1972.050+	2.500000-	.0500000+	.002224	2042.4	
1.383519+	.1877675+	.1054382-	7.368257+	300.2570+	
.5517512+	134.8096+	2.227266+	2.507506+	.0021876+	
23.73538+	15.59098+	.8915861+	.3555667+	20.0	1.049
1973.050+	2.500000-	.0500000+	.002206	2042.4	
.9092932+	.2495733+	.0547248-	3.643391+	297.9473+	
.2812677+	190.5580+	1.563551+	3.232838+	.0021869+	
24.14107+	15.73013+	.7096824+	.2195230+	40.0	1.048
1974.050+	.0000000+	.0500000+	.002194	2042.4	
1.008129+	.2666673+	.0268521-	3.780475+	298.2156+	
.2732409+	191.0866+	1.560630+	3.689524+	.0021815+	
23.48923+	15.28123+	.7917821+	.2146027+	40.0	1.048
1975.050+	2.500000+	.0500000+	.002180	2042.4	
1.058446+	.2970093+	.0138269+	3.563679+	294.7480+	
.2615526+	191.6137+	1.538240+	4.046779+	.0021815+	
22.74896+	14.62755+	.8390026+	.2073260+	40.0	1.047

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1976.050+	2.500000+	.0300000+	.002235	2042.4	
.7895666+	.1322434+	.0245723-	5.186192+	.0000000+	
.0000000+	95.15142+	.0000000+	0000000+	.0022361+	
.0000000+	.0000000+	.7895666+	.0000000+	10.0	1.000
1977.050+	.0000000+	.0300000+	.002229	2042.4	
.2062831+	.2435903+	.0161166-	.8468444+	.0000000+	
.0000000+	95.24064+	.0000000+	0000000+	.0022319+	
.0000000+	.0000000+	.2062831+	.0000000+	10.0	1.000
1978.050+	2.500000-	.0300000+	.002229	2042.4	
.1991699+	.2706559+	.0100826+	.7358786+	.0000000+	
.0000000+	95.24064+	.0000000+	0000000+	.0022319+	
.0000000+	.0000000+	.1991699+	.0000000+	10.0	1.000
1979.050+	2.500000-	.0300000+	.002215	2042.4	
.2311794+	.2554315+	.0206204-	.9050541+	.0000000+	
.0000000+	135.2011+	.0000000+	0000000+	.0022153+	
.0000000+	.0000000+	.2311794+	.0000000+	20.0	1.000
1980.050+	.0000000+	.0300000+	.002215	2042.4	
.2347360+	.2385155+	.0446250-	.9841538+	.0000000+	
.0000000+	135.2011+	.0000000+	0000000+	.0022153+	
.0000000+	.0000000+	.2347360+	.0000000+	20.0	1.000
1981.050+	2.500000+	.0300000+	.002210	2042.4	
.8215760+	.3188669+	.0442628+	2.576551+	.0000000+	
.0000000+	135.3267+	.0000000+	0000000+	.0022112+	
.0000000+	.0000000+	.8215760+	.0000000+	20.0	1.000
1982.050+	2.500000+	.0300000+	.002193	2042.4	
.8194421+	.3179495+	.0290986+	2.577270+	.0000000+	
.0000000+	191.1164+	.0000000+	0000000+	.0021949+	
.0000000+	.0000000+	.8194421+	.0000000+	40.0	1.000
1983.050+	.0000000+	.0300000+	.002179	2042.4	
.2336128+	.2427356+	.0519677-	.9624167+	.0000000+	
.0000000+	191.6436+	.0000000+	0000000+	.0021829+	
.0000000+	.0000000+	.2336128+	.0000000+	40.0	1.000
1984.050+	2.500000-	.0300000+	.002175	2042.4	
.2425979+	.2705135+	.0298161-	.8968054+	.0000000+	
.0000000+	191.8190+	.0000000+	0000000+	.0021789+	
.0000000+	.0000000+	.2425979+	.0000000+	40.0	1.000

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1988.050+	2.500000-	.0300000+	.002213	2038.9	
1.135111+	.2554315+	.0951039+	4.455651+	129.3590+	
.1841105+	95.58562+	1.338571+	6.181689+	.0022102+	
9.062831+	2.801130+	.3611552+	.1554842+	10.0	1.009
1989.050+	.0000000+	.0300000+	.002213	2038.9	
1.202131+	.2841857+	.1367157+	4.230050+	136.9477+	
.1935570+	95.58562+	1.432720+	6.210741+	.0022020+	
9.065070+	2.734697+	1.007185+	.1521632+	10.0	1.010
1990.050+	2.500000+	.0300000+	.002213	2038.9	
1.251225+	.3112543+	.2039158+	4.022125+	136.8211+	
.1846568+	95.58562+	1.431398+	6.779740+	.0022065+	
8.640261+	2.508945+	1.056783+	.1558737+	10.0	1.010
1991.050+	2.500000+	.0300000+	.002202	2038.9	
1.081108+	.3433947+	.1568290+	3.148587+	136.9475+	
.0931325+	135.5628+	1.010210+	1.299021+	.0022043+	
7.790861+	2.351924+	.9981313+	.0768371+	20.0	1.010
1992.050+	.0000000+	.0300000+	.002197	2038.9	
.9211610+	.3112543+	.0942632+	2.959512+	130.1001+	
.0835031+	135.6880+	.2588178+	11.03141+	.0022028+	
8.133288+	2.359530+	.9501689+	.0770680+	20.0	1.009
1993.050+	2.500000-	.0300000+	.002197	2038.9	
.8322458+	.2748845+	.0348706+	3.027615+	130.1001+	
.0956572+	135.6880+	.2588178+	8.700292+	.0022013+	
9.438152+	2.703011+	.7595800+	.0873057+	20.0	1.009
1994.050+	2.500000-	.0300000+	.002170	2038.9	
.6229577+	.2837614+	.0055423+	2.216501+	136.9475+	
.0969571+	192.1508+	.7127053+	11.04215+	.0022005+	
10.57013+	3.185513+	.5950631+	.0538901+	40.0	1.010
1995.050+	.0000000+	.0300000+	.002165	2038.9	
.7763131+	.3089751+	.0482252+	2.512543+	130.1001+	
.0421212+	192.3251+	.6764550+	13.39938+	.0022028+	
8.133288+	2.359530+	.7448859+	.0404831+	40.0	1.009
1996.050+	2.500000+	.0300000+	.002154	2038.9	
1.013520+	.3538470+	.0735038+	2.864289+	130.2201+	
.0354318+	192.8508+	.6722373+	20.60400+	.0022003+	
6.916032+	1.261810+	.9788375+	.0342202+	40.0	1.009

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2000.050+	2.500000-	.0300000+	.002288	2015.6	
3.279191+	.0608975+	.1733773-	53.54762+	290.5096+	
.9537040+	93.95956+	3.092918+	3.433373+	.0022721+	
20.40302+	13.47453+	1.678148+	.4881517+	10.0	1.048
2001.050+	.0000000+	.0300000+	.002279	2015.6	
3.400115+	.1996007+	.0213531-	17.03335+	287.7739+	
.9115054+	94.14263+	3.055706+	3.730219+	.0022620+	
19.76351+	12.87833+	1.776763+	.4768521+	10.0	1.047
2002.050+	2.500000+	.0300000+	.002279	2015.6	
3.371662+	.3230955+	.1295350+	10.43549+	293.4105+	
.9371175+	94.14263+	3.117783+	3.597908+	.0022620+	
19.94139+	13.11015+	1.740556+	.4837690+	10.0	1.049
2003.050+	2.500000+	.0300000+	.002272	2015.6	
1.902784+	.2681185+	.0723133+	7.093801+	291.1594+	
.4646344+	133.4030+	2.112551+	4.095221+	.0022612+	
19.94139+	13.12930+	1.295153+	.3172357+	20.0	1.048
2004.050+	.0000000+	.0300000+	.002267	2015.6	
1.904536+	.2376697+	.0161257+	8.350183+	291.1594+	
.4634744+	133.5320+	2.110446+	4.236274+	.0022620+	
20.09927+	13.3781+	1.351451+	.3190211+	20.0	1.048
2005.050+	2.500000-	.0300000+	.002261	2015.6	
1.845875+	.1510011+	.0131759-	10.19615+	291.1594+	
.4806342+	133.7897+	2.175240+	3.540507+	.0022620+	
20.62098+	13.56141+	1.246661+	.3246137+	20.0	1.048
2006.050+	2.500000-	.0300000+	.002244	2015.6	
1.187631+	.2341886+	.0389267-	5.072114+	291.1594+	
.2476972+	188.9614+	1.540040+	4.795497+	.0022620+	
21.03285+	13.65206+	.9520191+	.1965235+	40.0	1.048
2007.050+	.0000000+	.0300000+	.002221	2015.6	
1.277285+	.2525647+	.0038453+	5.051717+	293.4105+	
.2426111+	189.8605+	1.545429+	5.250973+	.0022620+	
20.44250+	13.56223+	1.010777+	.1952430+	40.0	1.049
2008.050+	2.500000+	.0300000+	.002217	2015.6	
1.351523+	.2739323+	.0565692+	4.861030+	291.4340+	
.2328802+	190.0401+	1.533536+	5.717933+	.0022570+	
19.80017+	13.0240+	1.060067+	.1380911+	40.0	1.048

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2009.050+	.0000000+	.0100000+	.002278	2019.8	
.4054531+	.2537399+	.337762-	1.597997+	.0000000+	
.0000000+	94.14484+	.0000000+	0000000+	.0022842+	
.0000000+	.0000000+	.4054531+	.0000000+	10.0	1.000
2010.040+	.0000000+	.0100000+	.002269	2019.8	
.4090097+	.2528941+	.0063538-	1.617315+	.0000000+	
.0000000+	.33.5344+	.0000000+	0000000+	.0022710+	
.0000000+	.0000000+	.4090097+	.0000000+	20.0	1.000
2011.050+	.0000000+	.0100000+	.002243	2019.8	
.4097210+	.2491459+	.0319068-	1.644592+	.0000000+	
.0000000+	188.9725+	.0000000+	0000000+	.0022450+	
.0000000+	.0000000+	.4097210+	.0000000+	40.0	1.000
2012.050+	.0000000+	.0100000+	.002217	2019.8	
.9074962+	.2764964+	.0188882+	3.282126+	136.3143+	
.0346687+	190.0393+	.7172954+	26.17617+	.0022056+	
6.448630+	1.938881+	.0770886+	.0335071+	40.0	1.010
2013.050+	.0000000+	.0100000+	.002235	2019.8	
1.163010+	.2748849+	.0591096+	4.230897+	130.2201+	
.0631183+	134.5596+	.9677501+	17.85994+	.0021805+	
6.480228+	1.840066+	1.091907+	.0611371+	20.0	1.009
2014.050+	.0000000+	.0100000+	.002250	2019.8	
1.771189+	.2740391+	.0954707+	6.463272+	137.3260+	
.1373434+	94.86686+	1.447565+	12.89606+	.0021733+	
6.501830+	1.940476+	1.557304+	.1207581+	10.0	1.010
2017.050+	.0000000+	.0100000+	.002261	2019.8	
6.110249+	.2960299+	.4465436+	20.64064+	293.0759+	
.5533720+	94.59325+	3.098275+	11.04184+	.0022502+	
11.85512+	7.818392+	3.933539+	.3562392+	10.0	1.048
2018.050+	.0000000+	.0100000+	.002249	2019.8	
3.385889+	.2757307+	.2542339+	12.27969+	295.3478+	
.2788308+	134.1690+	2.201311+	12.14316+	.0022502+	
11.85512+	7.878999+	2.647644+	.1180357+	20.0	1.049
2019.050+	.0000000+	.0100000+	.002212	2019.8	
1.980318+	.2542741+	.1239212+	7.788122+	295.0727+	
.1445203+	190.2082+	1.551313+	13.70269+	.0022529+	
12.15818+	8.082426+	1.730260+	.1262715+	40.0	1.049

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT
AND A JET CONVERGENCE ANGLE OF 60°

Key for Reading Following Data:

RUN NO:	α	h/D	ρ	BP
C_L	C_D	C_M	L/D	V_J
C_μ	V_o	V_J/V_o	A	ρ_1
Q	ΔV_J	C_L'	C_μ'	C_M/C_L
$1/C_\mu$	A	q	P_M/P_o	

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M.
FORCE

2020.106+ .0142264+ .0000000+ .0000000+ 0000000+	2.500000+ .0248665+ 294.7913+ .0000000+ 0000000+	.2500000+ .0053798- .0000003+ .0142264+ 10.0	.002324 .57 1116+ 0000000+ .0000000+ 1.000	2036.1 .0001107+ .0023297+ .3781554-
2021.106+ .02845 8+ .0000000+ .0000000+ 0000000+	.0000000+ .2266743+ 93.31 55+ .0000000+ 0000000+	.2500000+ .1192577- .0000011+ .0284528+ 10.0	.002319 .1255230+ 0000000+ .0000000+ 1.000	2036.1 .0001108+ .0023251+ 4.191415-
2022.106+ .0640189- .0000000+ .0000000+ 0000000+	2.500000- .2148331+ 93.40381+ .0000000+ 0000000+	.2500000+ .1748115- .0000011+ .0640189- 10.0	.002314 .2979936- 0000000+ .0000000+ 1.000	2036.1 .0001109+ .0023206+ 2.730623+
2023.106+ .0616478- .0000000+ .0000000+ 0000000+	2.500000- .2120138+ 114.5134+ .0000000+ 0000000+	.2500000+ .1484916- .0000009+ .0616478- 15.0	.002310 .2907727- 0000000+ .0000000+ 1.000	2036.1 .0001110+ .0023161+ 2.405708+
2024.106+ .0474214+ .0000000+ .0000000+ 0000000+	.0000000+ .2289298+ 114.4955+ .0000000+ 0000000+	.2500000+ .1149148- .0000009+ .0474214+ 15.0	.002310 .2071438+ 0000000+ .0000000+ 1.000	2036.1 .0001110+ .0023161+ 2.423269-
2025.106+ .1470063+ .0000000+ .0000000+ 0000000+	2.500000+ .2492290+ 114.5134+ .0000000+ 0000000+	.2500000+ .0505222- .0000096+ .1470063+ 15.0	.002310 .5898445+ 0000000+ .0000000+ 1.000	2036.1 .0011102+ .0023161+ .3436735-
2026.106+ .1529340+ .0000000+ .0000000+ 0000000+	2.500000+ .2317491+ 132.4931+ .0000000+ 0000000+	.2500000+ .0623745- .0000000+ .1529340+ 20.0	.002301 .6599120+ 0000000+ .0000000+ 1.000	2036.1 .0000111+ .0023071+ .4070524-
2027.106+ .0462358+ .0000000+ .0000000+ 0000000+	.0000000+ .2131415+ 132.6217+ .0000000+ 0000000+	.2500000+ .1040914- .0000008+ .0462358+ 20.0	.002296 .2169256+ 0000000+ .0000000+ 1.000	2036.1 .0001113+ .0023026+ 2.25131 -

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2028.106+	2.500000-	.2500000+	.002294	2036.1
.0782453-	.1987629+	.1526314-	.3936615-	.0001114+
.0000000+	132.7501+	.0000008+	0000000+	.0022981+
.0000000+	.0000000+	.0782453-	.0000000+	1.950677+
0000000+	0000000+	20.0	1.000	
2029.106+	2.500000-	.2500000+	.002282	2036.1
.0521635-	.2052474+	.1503907-	.2541496-	.0001117+
.0000000+	163.0646+	.0000006+	0000000+	.0022849+
.0000000+	.0000000+	.0521635-	.0000000+	2.883062+
0000000+	0000000+	30.0	1.000	
2030.106+	.0000000+	.2500000+	.002278	2036.1
.0687610+	.2176525+	.1145975-	.3159212+	.0001118+
.0000000+	163.2213+	.0000006+	0000000+	.0022805+
.0000000+	.0000000+	.0687610+	.0000000+	1.666605-
0000000+	0000000+	30.0	1.000	
2031.106+	2.500000+	.2500000+	.002276	2036.1
.1564906+	.2289298+	.0740000-	.6835748+	.0001119+
.0000000+	163.3779+	.0000006+	0000000+	.0022761+
.0000000+	.0000000+	.1564906+	.0000000+	.4728719-
0000000+	0000000+	30.0	1.000	
2032.106+	2.500000+	.2500000+	.002259	2036.1
.1582689+	.2342865+	.0752287-	.6755358+	.0001124+
.0000000+	189.3838+	.0000005+	0000000+	.0022588+
.0000000+	.0000000+	.1582689+	.0000000+	.4753219-
0000000+	0000000+	40.0	1.000	
2033.106+	.0000000+	.2500000+	.002245	2036.1
.0764670+	.2224453+	.1185909-	.3437564+	.0001126+
.0000000+	189.7435+	.0000005+	0000000+	.0022503+
.0000000+	.0000000+	.0764670+	.0000000+	1.550876-
0000000+	0000000+	40.0	1.000	
2034.106+	2.500000-	.2500000+	.002245	2036.1
.0569057-	.2173705+	.1427444-	.2617911-	.0001127+
.0000000+	189.9231+	.0000005+	0000000+	.0022460+
.0000000+	.0000000+	.0569057-	.0000000+	2.508438+
0000000+	0000000+	40.0	1.000	
2038.106+	2.500000-	.2500000+	.002290	2036.1
.4410191-	.0845799+	.1682933-	5.214225-	533.8817+
3.074611+	93.93481+	5.683533+	.1434390-	.0024049+
33.83253+	43.44006+	.1082358-	.7545778+	.3816009+
.3252443+	.1434390-	10.0	1.150	

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FORCE

2039.106+	.0000000+	.2500000+	.002288	2036.1
.043200-	.2706559+	.015500-	.3153765-	535.2350+
3.070640+	94.02544+	5.692448+	.0277982-	.0023935+
33.86471+	43.33395+	.0209693-	.7543333+	.2260304+
.3556649+	.0277982-	10.0	1.150	
2040.106+	2.500000+	.2500000+	.002288	2036.1
.0071132-	.4702647+	.1372665+	.0151259-	536.9811+
3.030083+	94.02544+	5.709955+	.0023094-	.0023881+
33.94142+	43.51732+	.0017433-	.7549069+	19.29740-
.3246665+	.0023094-	10.0	1.151	
2041.106+	2.500000+	.2500000+	.002283	2036.1
.2133963+	.4680092+	.1654034+	.4559661+	537.1353+
2.050535+	115.2680+	4.551204+	.1040685+	.0023841+
33.99847+	43.45693+	.0599537+	.6711882+	.7750994+
.4876771+	.1040685+	15.0	1.150	
2042.106+	.0000000+	.2500000+	.002277	2036.1
.0331949+	.3958343+	.0293558+	.0838608+	536.1353+
2.050535+	115.4895+	4.542285+	.0161884+	.0023834+
34.00834+	43.45693+	.0108816+	.6711882+	.8843467+
.4876771+	.0161884+	15.0	1.150	
2043.106+	2.500000-	.2500000+	.002277	2036.1
.2086542-	.2492290+	.0117716+	.8371987-	536.5849+
2.052256+	115.4895+	4.546178+	.1016706-	.0023794+
34.06541+	43.49337+	.0683606-	.6723735+	.0564172-
.4872685+	.1016706-	15.0	1.150	
2044.106+	2.500000-	.2500000+	.002278	2036.8
.0640189+	.2782681+	.0571253-	.2300619+	526.4283+
1.498486+	133.3326+	3.948232+	.0427223+	.0023711+
33.92282+	42.34314+	.0256230+	.5997577+	.8923201-
.5673399+	.0427223+	20.0	1.146	
2045.106+	.0000000+	.2500000+	.002273	2036.8
.2667454+	.4440449+	.0245611+	.6007172+	527.3153+
1.495216+	133.4603+	3.951101+	.1783992+	.0023617+
33.92573+	42.25072+	.1069027+	.5992331+	.0920772+
.5687996+	.1783992+	20.0	1.146	
2046.106+	2.500000+	.2500000+	.002264	2036.8
.4161229+	.5709149+	.0701247+	.7288702+	528.5110+
1.498606+	133.7152+	3.952510+	.2776732+	.0023610+
33.93569+	42.34653+	.1665420+	.5997769+	.1685193+
.5672865+	.2776732+	20.0	1.147	

G.E.M.
FORCE

2047.106+	2.500000+	.2500000+	.002250	2036.8
.5216356+	.5328539+	.0614337+	.9739466+	527.7582+
.9976480+	164.2428+	3.213279+	.5228653+	.0023501+
34.09288+	42.28621+	.2611248+	.4994113+	.1177714+
1.002357+	.5228653+	30.0	1.146	

2048.106+	.0000000+	.2500000+	.002241	2036.8
.3935977+	.4274108+	.0286710+	.9208884+	527.7582+
.9976480+	164.5536+	3.207210+	.3945256+	.0023536+
34.04273+	42.28621+	.1270305+	.4994113+	.0728434+
1.002357+	.3945256+	30.0	1.146	

2049.106+	2.500000-	.2500000+	.002241	2036.8
.2394781+	.3264787+	.0073629-	.7335183+	528.2008+
.9984846+	164.5536+	3.209900+	.2398416+	.0023517+
34.06978+	42.32157+	.1198298+	.4996202+	.0332513-
1.001517+	.2398416+	30.0	1.146	

2050.106+	2.500000-	.2500000+	.002211	2036.8
.3183162+	.3311306+	.0097506+	.9613010+	527.4442+
.7448924+	191.2708+	2.757578+	.4273312+	.0023464+
34.01457+	42.09725+	.1824274+	.4268987+	.0306319+
1.342475+	.4273312+	40.0	1.145	

2051.106+	.0000000+	.2500000+	.002209	2036.8
.4623588+	.4165564+	.0393460+	1.109954+	529.0848+
.7472093+	191.4488+	2.763583+	.6187808+	.0023418+
34.08147+	42.22819+	.2646270+	.4276587+	.0850984+
1.338312+	.6187808+	40.0	1.146	

2052.106+	2.500000+	.2500000+	.002204	2036.8
.5655004+	.4990219+	.0789005+	1.133217+	531.4843+
.7505980+	191.6266+	2.773540+	.7533997+	.0023411+
34.09150+	42.41971+	.3230326+	.4287666+	.1395234+
1.332270+	.7533997+	40.0	1.148	

2053.106+	5.000000+	.1500000+	.002265	2034.0
.3129813+	.3211039+	.0824104+	.9737943+	.0001122+
.0000000+	94.53639+	.0000011+	.0000000+	.0022651+
.0000000+	.0000000+	.3129813+	.0000000+	.2633078+
.0000000+	.0000000+	10.0	1.000	

2054.106+	2.500000+	.1500000+	.002265	2034.0
.1707171+	.2723475+	.0113654+	.6268354+	.0001122+
.0000000+	94.53639+	.0000011+	.0000000+	.0022651+
.0000000+	.0000000+	.1707171+	.0000000+	.0665745+
.0000000+	.0000000+	10.0	1.000	

G.E.M.
FORCE

2055.106+	.0000000+	.1500000+	.002261	2034.0
.0213396+	.2452819+	.0352970-	.0870004+	.0001123+
.0000000+	94.62635+	.0000011+	.0000000+	.0022608+
.0000000+	.0000000+	.0213396+	.0000000+	1.654059-
0000000+	0000000+	10.0	1.000	
2056.106+	2.500000-	.1500000+	.002265	2034.0
.1422642-	.2571231+	.0533318-	.5532922-	.0001122+
.0000000+	94.53639+	.0000011+	.0000000+	.0022651+
.0000000+	.0000000+	.1422642-	.0000000+	.3748789+
0000000+	0000000+	10.0	1.000	
2057.106+	5.000000-	.1500000+	.002265	2034.0
.1849435-	.2452819+	.0863031-	.7540037-	.0001122+
.0000000+	94.53639+	.0000011+	.0000000+	.0022651+
.0000000+	.0000000+	.1849435-	.0000000+	.4666457+
0000000+	0000000+	10.0	1.000	
2058.106+	5.000000-	.1500000+	.002260	2034.0
.1375221-	.1263051+	.1762041-	1.088800-	.0001123+
.0000000+	115.89914+	.0000009+	.0000000+	.0022608+
.0000000+	.0000000+	.1375221-	.0000000+	1.281278+
0000000+	0000000+	15.0	1.000	
2059.106+	2.500000-	.1500000+	.002260	2034.0
.1219407-	.2505501+	.0917348-	.4866922-	.0000112+
.0000000+	114.2783+	.0000000+	.0000000+	.0022608+
.0000000+	.0000000+	.1219407-	.0000000+	.7522897+
0000000+	0000000+	15.0	1.000	
2060.106+	.0000000+	.1500000+	.002253	2034.0
.0331942+	.2379517+	.0578953-	.1395030+	.0001124+
.0000000+	116.0097+	.0000000+	.0000000+	.0022565+
.0000000+	.0000000+	.0331949+	.0000000+	1.744098-
0000000+	0000000+	15.0	1.000	
2061.106+	2.500000+	.1500000+	.002253	2034.0
.1944278+	.2638895+	.0131121-	.7367771+	.0001124+
.0000000+	116.0097+	.0000009+	.0000000+	.0022565+
.0000000+	.0000000+	.1944278+	.0000000+	.0674397-
0000000+	0000000+	15.0	1.000	
2062.106+	5.000000+	.1500000+	.002253	2034.0
.3177235+	.3089989+	.0527177+	1.028235+	.0001124+
.0000000+	116.0097+	.0000009+	.0000000+	.0022565+
.0000000+	.0000000+	.3177235+	.0000000+	.1659234+
0000000+	0000000+	15.0	1.000	

G.E.M.
FORCE

2063.106+	5.000000+	.1500000+	.002267	2031.8
.2951983+	.2977215+	.0436742+	.9915246+	.0001121+
.0000000+	133.6507+	.0000008+	0000000+	.0022670+
.0000000+	.0000000+	.2951983+	.0000000+	.1479487+
0000000+	0000000+	20.0	1.000	

2064.106+	2.500000+	.1500000+	.002263	2031.8
.2098397+	.2469735+	.0340343-	.0496446+	.0001122+
.0000000+	133.7784+	.0000008+	0000000+	.0022627+
.0000000+	.0000000+	.2098397+	.0000000+	.1621918-
0000000+	0000000+	20.0	1.000	

2065.106+	.0000000+	.1500000+	.002244	2031.8
.0248962+	.2207537+	.0763673-	.1127763+	.0001126+
.0000000+	134.2880+	.0000008+	0000000+	.0022456+
.0000000+	.0000000+	.0248962+	.0000000+	3.067424-
0000000+	0000000+	20.0	1.000	

2066.106+	2.500000-	.1500000+	.002244	2031.8
.1209246-	.2241369+	.1029002-	.5395121-	.0001126+
.0000000+	134.2880+	.0000000+	0000000+	.0022456+
.0000000+	.0000000+	.1209246-	.0000000+	.8509452+
0000000+	0000000+	20.0	1.000	

2067.106+	5.000000-	.1500000+	.002240	2031.8
.1600472-	.2240427+	.1380411-	.7113757-	.0001127+
.0000000+	134.4151+	.0000000+	0000000+	.0022413+
.0000000+	.0000000+	.1600472-	.0000000+	.8625025+
0000000+	0000000+	20.0	1.000	

2068.106+	5.000000-	.1500000+	.002226	2031.8
.1493774-	.2328749+	.1433149-	.6414438-	.0001130+
.0000000+	165.1076+	.0000006+	0000000+	.0022287+
.0000000+	.0000000+	.1493774-	.0000000+	.9594149+
0000000+	0000000+	30.0	1.000	

2069.106+	2.500000-	.1500000+	.002224	2031.8
.0701006-	.2255466+	.1243823-	.3494769-	.0001131+
.0000000+	165.2627+	.0000006+	0000000+	.0022245+
.0000000+	.0000000+	.0701006-	.0000000+	1.380431+
0000000+	0000000+	30.0	1.000	

G.E.M.
FORCE

2070.106+	.0000000+	.1500000+	.002217	2031.8
.0379371+	.2261105+	.0931375-	.1677813+	.0001132+
.0000000+	165.4177+	.0000006+	0000000+	.0022203+
.0000000+	.0000000+	.0379371+	.0000000+	2.455048-
0000000+	0000000+	30.0	1.000	
2071.106+	2.500000+	.1500000+	.002217	2031.8
.1967988+	.2447181+	.0507065-	.8041860+	.0001132+
.0000000+	165.4177+	.0000006+	0000000+	.0022203+
.0000000+	.0000000+	.1967988+	.0000000+	2.576564-
0000000+	0000000+	30.0	1.000	
2072.106+	5.000000+	.1500000+	.002212	2031.8
.3129813+	.2988493+	.0225982+	1.047288+	.0001133+
.0000000+	165.5725+	.0000006+	0000000+	.0022162+
.0000000+	.0000000+	.3129813+	.0000000+	.0722031+
0000000+	0000000+	30.0	1.000	
2073.106+	5.000000+	.1500000+	.002204	2031.8
.3094247+	.2994131+	.0162700+	1.033437+	.0001135+
.0000000+	191.5537+	.0000005+	0000000+	.0022079+
.0000000+	.0000000+	.3094247+	.0000000+	.0525814+
0000000+	0000000+	40.0	1.000	
2074.106+	2.500000+	.1500000+	.002202	2031.8
.1920567+	.2435903+	.0590182-	.7884414+	.0001137+
.0000000+	191.7319+	.0000005+	0000000+	.0022038+
.0000000+	.0000000+	.1920567+	.0000000+	.3072959-
0000000+	0000000+	40.0	1.000	
2075.106+	.0000000+	.1500000+	.002193	2031.8
.0409009+	.2368239+	.0908577-	.1727062+	.0001139+
.0000000+	192.0880+	.0000005+	0000000+	.0021957+
.0000000+	.0000000+	.0409009+	.0000000+	2.221408-
0000000+	0000000+	40.0	1.000	
2076.106+	2.500000-	.1500000+	.002188	2031.8
.0960283-	.2368239+	.1201084-	.4054841-	.0001140+
.0000000+	192.2658+	.0000005+	0000000+	.0021916+
.0000000+	.0000000+	.0960283-	.0000000+	1.250760+
0000000+	0000000+	40.0	1.000	
2077.106+	5.000000-	.1500000+	.002186	2031.8
.1778303-	.2444361+	.1534397-	.7275122-	.0001141+
.0000000+	192.4434+	.0000005+	0000000+	.0021876+
.0000000+	.0000000+	.1778303-	.0000000+	.8628434+
0000000+	0000000+	40.0	1.000	

G.E.M.
FORCE

2083.106+	5.000000-	.1500000+	.002227	2031.8
.7184344+	.2503567-	.1104988-	2.869642-	541.8291+
3.084650+	95.29011+	5.686099+	.2329062+	.0023616+
34.05889+	43.58170+	.1758864+	.7551010+	.1538050-
.3241858+	.2329062+	10.0	1.152	
2084.106+	2.500000-	.1500000+	.002227	2031.8
1.187906+	.0625891-	.0685735-	18.97941-	541.8291+
3.084650+	95.29011+	5.686099+	.3851024+	.0023595+
34.08878+	43.58170+	.2908220+	.7551010+	.0577263-
.3241858+	.3851024+	10.0	1.152	
2085.106+	.0000000+	.1500000+	.002227	2031.8
1.550680+	.2182163+	.0680475+	7.106159+	541.8291+
3.072740+	95.29011+	5.686099+	.5046570+	.0023519+
34.06677+	43.41363+	.3807461+	.7544650+	.0438823+
.3254423+	.5046570+	10.0	1.152	
2086.106+	2.500000+	.1500000+	.002227	2031.8
1.394109+	.5108631+	.2080450+	2.729086+	541.8291+
3.072740+	95.29011+	5.686099+	.4537284+	.0023512+
34.07676+	43.41363+	.3423222+	.7544650+	.1492235+
.3254423+	.4537284+	10.0	1.152	
2087.106+	5.000000+	.1500000+	.002225	2031.8
1.045642+	.6800231+	.3386823+	1.537656+	541.8291+
3.060830+	95.37962+	5.680763+	.3416204+	.0023471+
34.00157+	43.24536+	.2574946+	.7537449+	.3230989+
.3267050+	.3416204+	10.0	1.152	
2088.106+	5.000000+	.1500000+	.002217	2031.8
.7682269+	.5187572+	.1874863+	1.480898+	541.8291+
2.048493+	116.9313+	4.633736+	.3750204+	.0023533+
34.04675+	43.11363+	.2520021+	.6719691+	.2440507+
.4881635+	.3750204+	15.0	1.152	
2089.106+	2.500000+	.1500000+	.002217	2031.8
.9721390+	.4150058+	.1776609+	2.342470+	541.8291+
2.048493+	116.9313+	4.633736+	.4745628+	.0023540+
34.03620+	43.11363+	.3188916+	.6719691+	.1827526+
.4881635+	.4745628+	15.0	1.152	
2090.106+	.0000000+	.1500000+	.002212	2031.8
1.048013+	.2582509+	.0482281+	4.058120+	541.8291+
2.056433+	117.0407+	4.629404+	.5096266+	.0023595+
34.08878+	43.58190+	.3428876+	.6728212+	.0460185+
.4862707+	.5096266+	15.0	1.152	

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2091.106+	2.500000-	.1500000+	.002210	2031.8
.7445162+	.1127733+	.0017399-	6.601882+	541.8291+
2.056433+	117.1501+	4.625083+	.3620424+	.0023602+
34.07881+	43.58190+	.2435895+	.6728212+	.0023369-
.486277+	.3670424+	15.0	1.152	

2092.106+	5.000000-	.1500000+	.002210	2031.8
.4505034+	.0157882-	.0282540-	28.53407-	539.8824+
2.049045+	117.1501+	4.608467+	.2198601+	.0023583+
34.10568+	43.4253+	.1477522+	.6720285+	.0627183-
.4880371+	.2198601+	15.0	1.151	

2093.106+	5.000000+	.1500000+	.002208	2027.6
.6686420+	.4254373+	.1146423+	1.571657+	528.5110+
1.486989+	135.2954+	3.906347+	.4496615+	.0022812+
34.84999+	42.01826+	.2688559+	.5979074+	.1714554+
.674997+	.4496615+	20.0	1.147	

2094.106+	2.500000+	.1500000+	.002206	2027.6
.7717835+	.3746893+	.1293081+	2.059795+	529.3985+
1.489486+	135.4218+	3.909255+	.5181541+	.0022736+
34.96713+	42.08882+	.3100171+	.5983107+	.1675446+
.6713723+	.5181541+	20.0	1.147	

2095.106+	.0000000+	.1500000+	.002206	2027.6
.8251326+	.2799597+	.0417702+	2.947325+	531.0404+
1.494106+	135.4218+	3.921379+	.5522583+	.0022705+
35.01506+	42.21936+	.3308330+	.5990547+	.0506224+
.6692964+	.5522583+	20.0	1.148	

2096.106+	2.500000-	.1500000+	.002202	2027.6
.5975098+	.2021461+	.0036599-	2.955830+	529.8417+
1.490733+	135.5481+	3.908883+	.4008160+	.0022698+
35.02570+	42.12406+	.2398931+	.5985118+	.0061253-
.6708107+	.4008160+	20.0	1.147	

2097.106+	5.000000-	.1500000+	.002202	2027.6
.3983399+	.0938837+	.0271697-	4.242903+	528.6430+
1.487360+	135.5481+	3.900039+	.2678166+	.0022677+
35.05768+	42.02876+	.1601456+	.5979674+	.0682074-
.6723318+	.2678166+	20.0	1.146	

2098.106+	5.000000-	.1500000+	.002179	2027.6
.3414342+	.1607019+	.1577515-	2.124642+	527.8850+
1.013358+	166.7829+	3.165102+	.3369331+	.0022626+
35.96123+	42.95714+	.1695843+	.5033175+	.4620261-
.9868171+	.3369331+	30.0	1.145	

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2099.106+	2.500000-	.1500000+	.002179	2027.6
.5572016+	.2469735+	.1059322-	2.256118+	528.6430+
1.010940+	166.9367+	3.166726+	.5511715+	.0022677+
35.74240+	42.84963+	.2770651+	.502702+	.1901147-
.9891778+	.5511715+	30.0	1.146	
2100.106+	.0000000+	.1500000+	.002177	2027.6
.7516294+	.3287342+	.0538109-	2.286435+	528.6430+
1.007067+	167.0903+	3.163814+	.7463548+	.0022684+
35.59463+	42.68545+	.3744914+	.5017605+	.0715923-
.9929824+	.7463542+	30.0	1.146	
2101.106+	2.500000+	.1500000+	.002177	2027.6
.8772962+	.400368+	.0265891+	2.182128+	528.6430+
1.007067+	167.0903+	3.163814+	.8711397+	.0022670+
35.61630+	42.68545+	.4371035+	.5017605+	.0303080+
.9929824+	.8711397+	30.0	1.146	
2102.106+	5.000000+	.1500000+	.002177	2027.6
.5524595+	.3670771+	.0712782+	1.505022+	527.4442+
1.008648+	167.0903+	3.156640+	.5477227+	.0022663+
35.76417+	42.75247+	.2750404+	.5021527+	.1290199+
.9914260+	.5477227+	30.0	1.145	
2103.106+	5.000000+	.1500000+	.002158	2027.6
.7095429+	.4292434+	.0974539+	1.653008+	528.6430+
.7553003+	193.6575+	2.729783+	.9394182+	.0022670+
35.61630+	42.68545+	.4042288+	.4302969+	.1373475+
1.323976+	.9394182+	40.0	1.146	
2104.106+	2.500000+	.1500000+	.002149	2027.6
.9353874+	.4444678+	.0196973+	2.104510+	531.7940+
.7598024+	194.0105+	2.741056+	1.231093+	.0022743+
35.50270+	42.93988+	.5315298+	.4317543+	.0210579+
1.316131+	1.231093+	40.0	1.148	
2105.106+	.0000000+	.1500000+	.002147	2027.6
.7895666+	.3670771+	.0287751-	2.150955+	531.7940+
.7627247+	194.1868+	2.738568+	1.035192+	.0022743+
35.63925+	43.10504+	.4479239+	.436964+	.0364442-
1.311089+	1.035192+	40.0	1.148	
2106.106+	2.500000-	.1500000+	.002147	2027.6
.5797268+	.2926467+	.0765975-	1.980978+	531.7940+
.7656470+	194.1868+	2.738568+	.7571724+	.0022743+
35.77580+	43.27019+	.3283367+	.4336353+	.1321270-
1.306084+	.7571724+	40.0	1.148	

G.E.M.
FORCE

2107.106+ .4018965+ .7646539+ 36.06554+ 1.307761+	5.000000- .2194850+ 194.3630+ 43.21467+ .5255926+	.1500000+ .1079969- 2.722147+ .2277480+ 40.0	.002142 1.831088+ .5255926+ .4333166+ 1.146	2017.8 525.8554+ 2017.8 2687163-
2108.106+ .3556606+ .0000000+ .0000000+ 0000000+	5.000000+ .3366283+ 93.87077+ .0000000+ 0000000+	.1000000+ .1083657+ .0000011+ .3556606+ 10.0	.002292 1.056537+ 0000000+ .0000000+ 1.000	2019.8 .0001110+ .0022976+ .3046088+
2109.106+ .1991699+ .0000000+ .0000000+ 0000000+	2.500000+ 1.363429+ 93.96221+ .0000000+ 0000000+	.1000000+ .5918837+ .0000011+ .1991699+ 10.0	.002287 .1460801+ 0000000+ .0000000+ 1.000	2019.8 .0001111+ .0022931+ 2.971751+
2110.106+ .0142264- .0000000+ .0000000+ 0000000+	.0000000+ .2469735+ 94.05357+ .0000000+ 0000000+	.1000000+ .0261512- .0000011+ .0142264- 10.0	.002283 .0576030- 0000000+ .0000000+ 1.000	2019.8 .0001112+ .0022886+ 1.838219+
2111.106+ .2560756- .0000000+ .0000000+ 0000000+	2.500000- .2655611+ 94.14484+ .0000000+ 0000000+	.1000000+ .0373880- .0000011+ .2560756- 10.0	.002278 .9642086- 0000000+ .0000000+ 1.000	2019.8 .0001113+ .0022842+ .1460040+
2112.106+ .1493774- .0000000+ .0000000+ 0000000+	5.000000- .2368233+ 94.14484+ .0000000+ 0000000+	.1000000+ .0989375- .0000011+ .1493774- 10.0	.002278 .6307531- 0000000+ .0000000+ 1.000	2019.8 .0001113+ .0022842+ .6623347+
2113.106+ .1375221- .0000000+ .0000000+ 0000000+	5.000000- .2311853+ 115.4211+ .0000000+ 0000000+	.1000000+ .1162837- .0000009+ .1375221- 15.0	.002276 .5948566- 0000000+ .0000000+ 1.000	2019.8 .0001114+ .0022798+ .8455640+
2114.106+ .1564906- .0000000+ .0000000+ 0000000+	2.500000- .2469735+ 115.5327+ .0000000+ 0000000+	.1000000+ .0850413- .0000009+ .1564906- 15.0	.002272 .6336332- 0000000+ .0000000+ 1.000	2019.8 .0001115+ .0022754+ .5434274+

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2115.106+	.000000+	.100000+	.002272	2019.8
.0237107+	.2503567+	.0341073-	.0947076+	.0001115+
.000000+	115.5327+	.000000+	000000+	.0022754+
.000000+	.000000+	.0237107+	.000000+	1.438500-
000000+	000000+	15.0	1.000	

2115.106+	2.500000+	.100000+	.002269	2019.8
.2465913+	.2920829+	.0225805+	.8442513+	.0001116+
.000000+	115.6441+	.000000+	000000+	.0022710+
.000000+	.000000+	.2465913+	.000000+	.0915705+
000000+	000000+	15.0	1.000	

2117.106+	5.000000+	.100000+	.002265	2019.8
.4030820+	.3349367+	.1081427+	1.203457+	.0001117+
.000000+	115.7555+	.000000+	000000+	.0022666+
.000000+	.000000+	.4030820+	.000000+	.2682896+
000000+	000000+	15.0	1.000	

2118.106+	5.000000+	.100000+	.002260	2019.8
.3983399+	.3315535+	.0997630+	1.201434+	.0001118+
.000000+	133.7937+	.000000+	000000+	.0022623+
.000000+	.000000+	.3983399+	.000000+	.2504469+
000000+	000000+	20.0	1.000	

2119.106+	2.500000+	.100000+	.002260	2019.8
.2311794+	.2715017+	.0139471+	.8514839+	.0001118+
.000000+	133.7937+	.000000+	000000+	.0022623+
.000000+	.000000+	.2311794+	.000000+	.0603302+
000000+	000000+	20.0	1.000	

2120.106+	.000000+	.100000+	.002258	2019.8
.0177830+	.2427445+	.0410343-	.0732582+	.0001119+
.000000+	133.9221+	.000000+	000000+	.0022579+
.000000+	.000000+	.0177830+	.000000+	2.307497-
000000+	000000+	20.0	1.000	

2121.106+	2.500000-	.100000+	.002258	2019.8
.1778303-	.2418987+	.0769997-	.7351435-	.0001119+
.000000+	133.9221+	.000000+	000000+	.0022579+
.000000+	.000000+	.1778303-	.000000+	.4329957+
000000+	000000+	20.0	1.000	

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2122.106+	5.000000-	.1000000+	.002253	2019.8
.1722340-	.207537+	.1204136-	.6027512-	.0001121+
.0000000+	134.0503+	.0000000+	0000000+	.0002530+
.0000000+	.0000000+	.1722340-	.0000000+	.7873573+
0000000+	0000000+	20.0	1.000	
2123.106+	5.000000-	.1000000+	.002230	2019.8
.1683460-	.2441542+	.1319193-	.6895042-	.0001126+
.0000000+	164.2714+	.0000000+	0000000+	.0002323+
.0000000+	.0000000+	.1723440-	.0000000+	.7831200+
0000000+	0000000+	30.0	1.000	
2124.106+	2.500000-	.1000000+	.002226	2019.8
.1659749-	.2165027+	.1055027-	.6735731-	.0001127+
.0000000+	164.1310+	.0000000+	0000000+	.0002281+
.0000000+	.0000000+	.1759749-	.0000000+	.6380648+
0000000+	0000000+	30.0	1.000	
2125.106+	.0000000+	.1000000+	.002221	2019.8
.0403082+	.2424626+	.0769330-	.1762450+	.0001128+
.0000000+	135.2570+	.0000000+	0000000+	.0002239+
.0000000+	.0000000+	.0403082+	.0000000+	1.412417-
0000000+	0000000+	30.0	1.000	
2126.106+	2.500000+	.1000000+	.002221	2019.8
.2513335+	.2706559+	.0044631-	.9206087+	.0001128+
.0000000+	165.2870+	.0000000+	0000000+	.0002239+
.0000000+	.0000000+	.2513335+	.0000000+	.0177608-
0000000+	0000000+	30.0	1.000	
2127.106+	5.000000+	.1000000+	.002217	2019.8
.4078241+	.3753510+	.0769337+	1.253489+	.0001129+
.0000000+	165.4426+	.0000000+	0000000+	.0002212+
.0000000+	.0000000+	.4078241+	.0000000+	.1887669+
0000000+	0000000+	30.0	1.000	
2128.106+	5.000000+	.1000000+	.002202	2019.8
.4054531+	.3631514+	.0735006+	1.253261+	.0001130+
.0000000+	161.5859+	.0000000+	0000000+	.0002207+
.0000000+	.0000000+	.4054531+	.0000000+	.1460482+
0000000+	0000000+	40.0	1.000	
2129.106+	2.500000+	.1000000+	.002195	2019.8
.2614105+	.2728101+	.0175225-	.9608604+	.0001134+
.0000000+	161.2443+	.0000000+	0000000+	.0001990+
.0000000+	.0000000+	.2614105+	.0000000+	.0573140-
0000000+	0000000+	40.0	1.000	

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2130.106+	.0000000+	.1000000+	.002191	2019.8
.0392311+	.2444361+	.0651777-	.1236770+	.0001135+
.0000000+	192.1233+	.0000005+	0000000+	.0021949+
.0000000+	.0000000+	.0302311+	.0000000+	2.155978-
0000000+	0000000+	40.0	1.000	

2131.106+	2.500000-	.1000000+	.002191	2019.8
.1600472-	.2533170+	.1004348-	.6318061-	.0001135+
.0000000+	192.1233+	.0000005+	0000000+	.0021949+
.0000000+	.0000000+	.1600472-	.0000000+	.6275322+
0000000+	0000000+	40.0	1.000	

2132.106+	5.000000-	.1000000+	.002189	2019.8
.1760520-	.2512025+	.1356907-	.7008368-	.0001137+
.0000000+	192.3021+	.0000005+	0000000+	.0021908+
.0000000+	.0000000+	.1760520-	.0000000+	.770722+
0000000+	0000000+	40.0	1.000	

2138.106+	5.000000-	.1000000+	.002250	2019.8
1.102547+	.0236823+	.0033558-	46.55558+	296.3324+
1.108619+	94.86354+	3.123775+	.9945231+	.0021837+
24.20446+	15.66328+	.5278766+	.5257561+	.0030437-
.9020225+	.9945231+	10.0	1.048	

2139.106+	2.500000-	.1000000+	.002245	2019.8
1.479548+	.1691599+	.019877 +	8.746443+	298.6295+
1.108680+	94.95401+	3.144991+	1.334512+	.0021837+
24.01958+	15.66414+	.7016465+	.5257697+	.0134346+
.9019732+	1.334512+	10.0	1.049	

2140.106+	.0000000+	.1000000+	.002245	2019.8
1.714284+	.2537399+	.0535632+	6.756066+	298.6295+
1.094239+	94.95401+	3.144991+	1.566644+	.0021845+
23.69856+	15.46010+	.8185713+	.5224996+	.031245 +
.9138769+	1.566644+	10.0	1.049	

2141.106+	2.500000+	.1000000+	.002238	2019.8
1.643152+	.3298619+	.1575439+	4.98133 +	296.3324+
1.081913+	95.04440+	3.117831+	1.518745+	.0021837+
23.62139+	15.28596+	.7892507+	.5196727+	.0958791+
.9242880+	1.518745+	10.0	1.048	

2142.106+	5.000000+	.1000000+	.002238	2019.8
1.515114+	.3653855+	.1653482+	4.146617+	296.6021+
1.090070+	95.04440+	3.120669+	1.389923+	.0021798+
23.82113+	15.40120+	.7249107+	.5215471+	.1091325+
.9173720+	1.389923+	10.0	1.048	

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2143.106+	5.000000+	.1000000+	.002236	2019.8
1.119145+	.3439586+	.1430385+	3.253721+	298.9014+
.7393550+	116.5198+	2.565240+	1.513677+	.0021798+
24.04909+	15.66911+	.6434255+	.4250742+	.1278105+
1.352530+	1.513677+	15.0	1.049	

2144.106+	2.500000+	.1000000+	.002236	2019.8
1.403673+	.3631301+	.1305382+	3.865485+	296.6021+
.7210632+	116.5198+	2.545508+	1.94667.+	.0021790+
23.64406+	15.28146+	.8155853+	.4189638+	.0929975+
1.386840+	1.94667 +	15.0	1.048	

2145.106+	.0000000+	.1000000+	.002231	2019.8
1.275636+	.3112543+	.0903555+	4.098371+	296.6021+
.7367101+	116.6303+	2.543096+	1.731530+	.0021790+
24.15713+	15.61306+	.7345129+	.4241986+	.0708317+
1.357385+	1.731530+	15.0	1.048	

2146.106+	2.500000-	.1000000+	.002231	2019.8
1.076466+	.2605063+	.0468605+	4.132206+	296.6021+
.7293213+	116.6303+	2.543096+	1.475983+	.0021790+
23.91485+	15.45647+	.6224789+	.4217384+	.0435317+
1.371137+	1.475983+	15.0	1.048	

2147.106+	5.000000-	.1000000+	.002231	2019.8
.8014219+	.2029919+	.0455596+	3.948047+	296.6021+
.7414911+	116.6303+	2.543096+	1.080824+	.0021790+
24.31390+	15.71438+	.4601929+	.4257794+	.0568485+
1.348633+	1.080824+	15.0	1.048	

2148.106+	5.000000-	.1000000+	.002212	2019.8
.8109062+	.1928423+	.1325614-	4.205020+	296.8717+
.5944715+	135.1893+	2.195969+	1.364079+	.0021758+
26.00539+	16.79814+	.5085736+	.3728329+	.1634732-
1.682166+	1.364079+	20.0	1.048	

2149.106+	2.500000-	.1000000+	.002212	2019.8
1.049198+	.2655811+	.0830316-	3.950576+	296.8717+
.5755476+	135.1893+	2.195969+	1.822957+	.0021743+
25.19490+	16.6340+	.6659.64+	.3653000+	.0791381-
1.737475+	1.822957+	20.0	1.048	

2150.106+	.0000000+	.1000000+	.002212	2019.8
1.202132+	.3061795+	.0468631-	3.926235+	299.1730+
.5783652+	135.1893+	2.21299.+	2.078501+	.0021758+
25.10619+	16.3430 +	.7616316+	.3664330+	.0389833-
1.729011+	2.078501+	20.0	1.049	

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2151.106+	2.500000+	.1000000+	.002210	2019.8
1.301717+	.3628481+	.0228494-	3.587500+	296.8717+
.5657593+	135.3163+	2.193908+	2.300833+	.0021751+
24.75789+	15.98681+	.831365 +	.361332+	.0175532-
1.767535+	2.300833+	20.0	1.048	
2152.106+	5.000000+	.1000000+	.002210	2019.8
1.259038+	.3780725+	.0347887+	3.330150+	296.8717+
.5693484+	135.3163+	2.193908+	2.211367+	.0021751+
24.91495+	16.08823+	.8022684+	.3627928+	.0276312+
1.756393+	2.211367+	20.0	1.048	
2153.106+	5.000000+	.1000000+	.002192	2019.8
1.278007+	.4426352+	.0807502+	2.887269+	296.8717+
.3632519+	166.3574+	1.784540+	3.518239+	.0021758+
23.83590+	15.39676+	.9371696+	.2664598+	.0631845+
2.752910+	3.518239+	30.0	1.048	
2154.106+	2.500000+	.1000000+	.002185	2019.8
1.199761+	.3845570+	.0059.96+	3.119854+	299.1730+
.3768087+	166.6669+	1.795035+	3.184007+	.0021765+
24.52683+	15.97138+	.8714078+	.2736826+	.0049423+
2.653866+	3.184007+	30.0	1.049	
2155.106+	.0000000+	.1000000+	.002185	2019.8
1.064610+	.3428309+	.0218165-	3.10535 +	296.8717+
.3778254+	166.6669+	1.781227+	2.817731+	.0021743+
24.80927+	16.01447+	.7726746+	.2742186+	.0204925-
2.6467.4+	2.817731+	30.0	1.048	
2156.106+	2.500000-	.1000000+	.002181	2019.8
.9081201+	.2937745+	.0550946-	3.091214+	296.6021+
.3837847+	166.8215+	1.777961+	2.366222+	.0021790+
25.16902+	16.26706+	.6562582+	.2773442+	.0606689-
2.605627+	2.366222+	30.0	1.048	
2157.106+	5.000000-	.1000000+	.002176	2019.8
.6947237+	.2605063+	.0634900-	2.666820+	296.8717+
.3932691+	166.9758+	1.777931+	1.766535+	.0021751+
25.81446+	16.66906+	.4982885+	.2822635+	.0913888-
2.542787+	1.766535+	30.0	1.049	
2158.106+	5.000000-	.1000000+	.002167	2019.8
.6224061+	.2685414+	.0643519-	2.317728+	297.1409+
.2968522+	193.3511+	1.536794+	2.096686+	.0021704+
26.01330+	16.77646+	.4799360+	.2289021+	.1033922-
3.368679+	2.096686+	40.0	1.049	

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2159.106+	2.500000-	.1000000+	.002160	2019.8
.8020147+	.2994131+	.0624001-	2.678622+	297.1409+
.2888512+	193.5287+	1.535383+	2.776566+	.0021696+
25.32090+	16.32429+	.6222709+	.2241152+	.0778041-
3.461989+	2.776566+	40.0	1.048	
2160.106+	.0000000+	.1000000+	.003160	2019.8
.9425006+	.3450863+	.0172149-	2.731202+	297.1409+
.2800338+	193.5287+	1.535383+	3.365666+	.0021704+
24.53950+	15.82598+	.7363091+	.2187706+	.0182652-
3.570996+	3.365666+	40.0	1.048	
2161.106+	2.500000+	.1000000+	.002156	2019.8
1.088321+	.3835702+	.0068153+	2.837345+	297.1409+
.2735024+	193.7062+	1.533977+	3.979202+	.0021711+
23.95890+	15.45686+	.8545892+	.2147639+	.0062622+
3.656274+	3.979202+	40.0	1.048	
2162.106+	5.000000+	.1000000+	.002151	2019.8
1.193241+	.4347411+	.0620137+	2.744716+	297.1409+
.2640319+	193.8835+	1.532574+	4.519307+	.0021719+
23.12131+	14.92164+	.9439962+	.2088807+	.0519708+
3.787420+	4.519307+	40.0	1.048	
2163.106+	2.500000+	.0500000+	.002276	2017.0
.5192645+	.3027963+	.0581188+	1.714896+	.0001113+
.0000000+	94.10590+	.0000011+	0000000+	.0022810+
.0000000+	.0000000+	.5192645+	.0000000+	.1119252+
0000000+	0000000+	10.0	1.000	
2164.106+	.0000000+	.0500000+	.002274	2017.0
.2418492+	.2672727+	.0360035+	.9048779+	.0001114+
.0000000+	94.29714+	.0000011+	0000000+	.0022766+
.0000000+	.0000000+	.241849 +	.0000000+	.1488677+
0000000+	0000000+	10.0	1.000	
2165.106+	2.500000-	.0500000+	.002269	2017.0
.1351510+	.2638895+	.0459389+	.5121499+	.0001115+
.0000000+	94.38829+	.0000011+	0000000+	.0022722+
.0000000+	.0000000+	.1351510+	.0000000+	.3399079+
0000000+	0000000+	10.0	1.000	
2166.106+	2.500000-	.0500000+	.002262	2017.0
.1090692+	.2762946+	.0534384+	.3947570+	.0001117+
.0000000+	115.8306+	.0000009+	0000000+	.0022635+
.0000000+	.0000000+	.1090692+	.0000000+	.4899500+
0000000+	0000000+	15.0	1.000	

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2167.106+	.0000000+	.0500000+	.002257	2017.0
.2750442+	.2830610+	.0591997+	.9716781+	.0001118+
.0000000+	115.9419+	.0000009+	0000000+	.0022591+
.0000000+	.0000000+	.2750442+	.0000000+	.2152370+
0000000+	0000000+	15.0	1.000	

2168.106+	2.500000+	.0500000+	.002255	2017.0
.5263777+	.2999770+	.0742831+	1.751726+	.0001119+
.0000000+	116.0531+	.0000009+	0000000+	.0022548+
.0000000+	.0000000+	.5263777+	.0000000+	.1411214+
0000000+	0000000+	15.0	1.000	

2169.106+	2.500000+	.0500000+	.002250	2017.0
.5121513+	.2968757+	.0162081+	1.725136+	.0001121+
.0000000+	134.1420+	.0000008+	0000000+	.0022505+
.0000000+	.0000000+	.5121513+	.0000000+	.0902236+
0000000+	0000000+	20.0	1.000	

2170.106+	.0000000+	.0500000+	.002246	2017.0
.2809719+	.2613521+	.0356763+	1.075070+	.0001122+
.0000000+	134.2701+	.0000008+	0000000+	.0022462+
.0000000+	.0000000+	.2809719+	.0000000+	.1269747+
0000000+	0000000+	20.0	1.000	

2171.106+	2.500000-	.0500000+	.002246	2017.0
.0960283+	.2503567+	.0187143+	.3835660+	.0000112+
.0000000+	134.2701+	.0000000+	0000000+	.0022462+
.0000000+	.0000000+	.0960283+	.0000000+	.1948839+
0000000+	0000000+	20.0	1.000	

2172.106+	2.500000-	.0500000+	.002228	2017.0
.1232956+	.2565593+	.004751-	.4805738+	.0001126+
.0000000+	165.0818+	.0000006+	0000000+	.0022292+
.0000000+	.0000000+	.1232956+	.0000000+	.0383240-
0000000+	0000000+	30.0	1.000	

2173.106+	.0000000+	.0500000+	.002223	2017.0
.2868995+	.2588147+	.0088979+	1.108513+	.0001127+
.0000000+	165.2381+	.0000006+	0000000+	.0022249+
.0000000+	.0000000+	.2868995+	.0000000+	.0310143+
0000000+	0000000+	30.0	1.000	

2174.106+	2.500000+	.0500000+	.002218	2017.0
.5666859+	.2937745+	.0525559+	1.028982+	.0001128+
.0000000+	165.3942+	.0000006+	0000000+	.0022207+
.0000000+	.0000000+	.5666859+	.0000000+	.0929190+
0000000+	0000000+	30.0	1.000	

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2175.106+	2.500000+	.0500000+	.002209	2017.0
.5459390+	.2943383+	.0267465+	1.854800+	.0001130+
.0000000+	191.3508+	.0000005+	0000000+	.0022124+
.0000000+	.0000000+	.5459390+	.0000000+	.0489917+
0000000+	0000000+	40.0	1.000	
2176.106+	.0000000+	.0500000+	.002207	2017.0
.3058681+	.2596605+	.0152272-	1.177953+	.0001131+
.0000000+	191.5306+	.0000005+	0000000+	.0022082+
.0000000+	.0000000+	.3058681+	.0000000+	.0497837-
0000000+	0000000+	40.0	1.000	
2177.106+	2.500000-	.0500000+	.002194	2017.0
.1227029+	.2579689+	.0251773-	.4756499+	.0001134+
.0000000+	192.0689+	.0000005+	0000000+	.0021959+
.0000000+	.0000000+	.1227029+	.0000000+	.2051893-
0000000+	0000000+	40.0	1.000	
2181.106+	2.500000-	.0500000+	.002256	2021.2
3.215172+	.0710471+	.0419947-	45.25403+	296.7196+
.9972353+	94.73815+	3.131997+	3.224085+	.0022173+
21.41534+	14.08957+	1.609811+	.4993078+	.0130614-
1.00277+	3.224085+	10.0	1.049	
2182.106+	.0000000+	.0500000+	.002252	2021.2
3.528153+	.2165247+	.1555694+	16.29445+	296.7196+
.9665812+	94.82868+	3.129007+	3.650136+	.0022180+
20.74993+	13.65647+	1.794054+	.4915033+	.0440937+
1.034574+	3.650136+	10.0	1.049	
2183.106+	2.500000+	.0500000+	.002252	2021.2
3.400115+	.3501611+	.0869393+	9.710144+	294.4371+
.9623820+	94.82868+	3.104938+	3.533020+	.0022165+
20.83424+	13.59714+	1.732647+	.4904152+	.0255695+
1.039088+	3.533020+	10.0	1.048	
2184.106+	2.500000+	.0500000+	.002247	2021.2
2.342618+	.3225317+	1.293428+	7.263217+	296.7196+
.6552577+	116.2578+	2.552255+	3.575109+	.0022173+
21.10720+	13.88684+	1.415258+	.3958644+	.5571293+
1.526117+	3.575109+	15.0	1.049	
2185.106+	.0000000+	.0500000+	.002240	2021.2
2.446945+	.2424626+	.0563181+	10.09205+	296.9932+
.6471577+	116.3684+	2.552179+	3.781064+	.0022132+
20.86551+	13.71518+	1.485556+	.3928936+	.0230157+
1.545218+	3.781064+	15.0	1.049	

G.E.M.
FORCE

2186.106+	2.500000-	.0500000+	.002240	2021.2
2.181385+	.1556271+	.0300549-	14.01673+	296.9932+
.6645661+	116.3684+	2.552179+	3.282420+	.0022124+
21.43415+	14.08412+	1.310482+	.3992428+	.0137779-
1.504741+	3.282420+	15.0	1.049	
2187.106+	2.500000-	.0500000+	.002238	2021.2
1.746293+	.1852301+	.0097963-	9.427695+	296.9932+
.5065848+	134.4984+	2.208154+	3.447189+	.0022124+
21.78507+	14.31470+	1.159107+	.3362471+	.0056097-
1.974003+	3.447189+	20.0	1.049	
2188.106+	.0000000+	.0500000+	.002233	2021.2
1.931237+	.2520483+	.0469006+	7.662168+	297.2665+
.4881019+	134.6259+	2.208092+	3.956626+	.0022084+
21.00955+	13.79243+	1.297785+	.3280030+	.0242852+
2.048752+	3.956626+	20.0	1.049	
2189.106+	2.500000+	.0500000+	.002229	2021.2
1.863661+	.2892635+	.0848761+	6.442780+	294.9799+
.4875893+	134.7533+	2.189035+	3.822195+	.0022084+
21.15018+	13.77794+	1.252806+	.3277714+	.0455426+
2.050906+	3.872195+	20.0	1.048	
2190.106+	2.500000+	.0500000+	.002219	2021.2
1.448724+	.2819333+	.0644653+	5.138535+	297.5396+
.3298423+	165.3588+	1.799357+	4.392171+	.0022043+
21.31586+	13.98066+	1.089395+	.2480311+	.0444980+
3.031751+	4.392171+	30.0	1.049	
2191.106+	.0000000+	.0500000+	.002212	2021.2
1.455837+	.2700921+	.0380160+	5.390152+	295.2509+
.3273051+	165.6700+	1.782162+	4.447952+	.0022043+
21.31586+	13.87314+	1.096837+	.2465937+	.0261128+
3.055253+	4.447952+	30.0	1.048	
2192.106+	2.500000-	.0500000+	.002212	2021.2
1.285120+	.2323130+	.0030579+	5.531847+	295.2509+
.3368235+	165.6700+	1.782162+	3.815411+	.0022028+
21.95083+	14.27657+	.9613238+	.2519581+	.0023794+
2.968913+	3.815411+	30.0	1.048	
2193.106+	2.500000-	.0500000+	.002194	2021.2
1.098991+	.2592376+	.0140282+	4.239319+	297.5396+
.2539219+	192.0358+	1.549396+	4.328067+	.0021967+
21.95482+	14.35028+	.876443+	.2025021+	.0127646+
3.938218+	4.328067+	40.0	1.049	

G.E.M.
FORCE

2194.106+	.0000000+	.0500000+	.002192	2021.2
1.246590+	.2850345+	.0337310+	4.373471+	297.8125+
.2448265+	192.2146+	1.549375+	5.091730+	.0021935+
21.18051+	13.83625+	1.001417+	.1966752+	.0270586+
4.084534+	5.091730+	40.0	1.049	
2195.106+	2.500000+	.0500000+	.002178	2021.2
1.349733+	.3053337+	.0564150+	4.420513+	297.8125+
.2420443+	192.7497+	1.545073+	5.576382+	.0021950+
20.92540+	13.67902+	1.086702+	.1948757+	.0492068+
4.131473+	5.576382+	40.0	1.049	
2196.106+	2.500000+	.0300000+	.002241	2022.6
.6686420+	.3112543+	.0426241+	2.148217+	.0001124+
.0000000+	94.98123+	.0000011+	0000000+	.0022439+
.0000000+	.0000000+	.6686420+	.0000000+	.0637473+
0000000+	0000000+	10.0	1.000	
2197.106+	.0000000+	.0300000+	.002241	2022.6
.1636038+	.2588147+	.0132307-	.6321273+	.0000112+
.0000000+	94.98123+	.0000001+	0000000+	.0022439+
.0000000+	.0000000+	.1636038+	.0000000+	.0808709-
0000000+	0000000+	10.0	1.000	
2198.106+	2.500000-	.0300000+	.002241	2022.6
.2347360+	.2588147+	.0429183-	.9069652+	.0001124+
.0000000+	94.98123+	.0000011+	0000000+	.0022439+
.0000000+	.0000000+	.2347360+	.0000000+	.1828365-
0000000+	0000000+	10.0	1.000	
2199.106+	2.500000-	.0300000+	.002238	2022.6
.2228806+	.2605063+	.0319879-	.8555670+	.0001125+
.0000000+	116.4444+	.0000009+	0000000+	.0022397+
.0000000+	.0000000+	.2228806+	.0000000+	.1435203-
0000000+	0000000+	15.0	1.000	
2200.106+	.0000000+	.0300000+	.002233	2022.6
.1991699+	.2582509+	.0276352-	.7712265+	.0001126+
.0000000+	116.5548+	.0000009+	0000000+	.0022354+
.0000000+	.0000000+	.1991699+	.0000000+	.1387522-
0000000+	0000000+	15.0	1.000	
2201.106+	2.500000+	.0300000+	.002233	2022.6
.6828684+	.3078711+	.0396143+	2.218033+	.0001126+
.0000000+	116.5548+	.0000009+	0000000+	.0022354+
.0000000+	.0000000+	.6828684+	.0000000+	.0580116+
0000000+	0000000+	15.0	1.000	

G.E.M.
FORCE

2202.106+	2.500000+	.0300000+	.002224	2022.6
.6793118+	.3095627+	.0397078+	2.194423+	.0001128+
.0000000+	134.8476+	.0000008+	0000000+	.0022270+
.0000000+	.0000000+	.6793118+	.0000000+	.0584530+
0000000+	0000000+	20.0	1.000	
2203.106+	.0000000+	.0300000+	.002224	2022.6
12.57616-	.2478193+	.2020676-	50.74728-	.0001128+
.0000000+	134.8476+	.0000008+	0000000+	.0022270+
.0000000+	.0000000+	12.57616-	.0000000+	.0160675+
0000000+	0000000+	20.0	1.000	
2204.106+	2.500000-	.0300000+	.002224	2022.6
.2062831+	.2571231+	.0288494-	.8022737+	.0001128+
.0000000+	134.8476+	.0000008+	0000000+	.0022270+
.0000000+	.0000000+	.2062831+	.0000000+	.1398535-
0000000+	0000000+	20.0	1.000	
2205.106+	2.500000-	.0300000+	.002206	2022.6
.2228806+	.2610702+	.0360773-	.8537191+	.0001132+
.0000000+	165.7847+	.0000006+	0000000+	.0022103+
.0000000+	.0000000+	.2228806+	.0000000+	.1618684-
0000000+	0000000+	30.0	1.000	
2206.106+	.0000000+	.0300000+	.002202	2022.6
.2205095+	.2469735+	.0433786-	.8928469+	.0001133+
.0000000+	165.9395+	.0000006+	0000000+	.0022062+
.0000000+	.0000000+	.2205095+	.0000000+	.1967200-
0000000+	0000000+	30.0	1.000	
2207.106+	2.500000+	.0300000+	.002199	2022.6
.6781262+	.3067434+	.0316676+	2.210727+	.0001134+
.0000000+	166.0949+	.0000006+	0000000+	.0022020+
.0000000+	.0000000+	.6781262+	.0000000+	.0466986+
0000000+	0000000+	30.0	1.000	
2208.106+	2.500000+	.0300000+	.002188	2022.6
.6650853+	.3006818+	.0217931+	2.211923+	.0011380+
.0000000+	192.3460+	.0000059+	0000000+	.0021898+
.0000000+	.0000000+	.6650853+	.0000000+	.0327675+
0000000+	0000000+	40.0	1.000	
2209.106+	.0000000+	.0300000+	.002183	2022.6
.2258445+	.2495109+	.0467424-	.9051485+	.0001139+
.0000000+	192.5243+	.0000005+	0000000+	.0021857+
.0000000+	.0000000+	.2258445+	.0000000+	.2069672-
0000000+	0000000+	40.0	1.000	

G.E.M.
FORCE

2210.106+	2.500000-	.0300000+	.002179	2022.6
.2276228+	.2660040+	.0425937-	.8557117+	.0001140+
.0000000+	192.7025+	.0000005+	0000000+	.0021817+
.0000000+	.0000000+	.2276228+	.0000000+	.1871241-
0000000+	0000000+	40.0	1.000	

2214.106+	2.500000+	.0300000+	.002233	2021.9
4.808531+	.4110587+	.1551426+	11.69791+	296.1716+
.8241781+	95.17328+	3.111920+	5.834335+	.0022316+
17.61790+	11.64451+	2.635999+	.4518079+	.0322640+
1.213329+	5.834335+	10.0	1.049	

2215.106+	.0000000+	.0300000+	.002224	2021.9
5.036154+	.2148331+	.0483161+	23.44216+	294.4371+
.7908747+	95.35336+	3.087852+	6.367828+	.0022226+
17.07442+	11.17398+	2.812119+	.4416136+	.0095938+
1.264422+	6.367828+	10.0	1.048	

2216.106+	2.500000-	.0300000+	.002220	2021.9
4.744512+	.0405983+	.0630399-	116.8645+	296.7196+
.8400517+	95.44328+	3.108858+	5.647881+	.0022226+
17.99661+	11.86872+	2.578467+	.4565370+	.0132869-
1.190402+	5.647881+	10.0	1.049	

2217.106+	2.500000-	.0300000+	.002215	2021.9
3.238882+	.1127733+	.0814770-	28.72029+	296.7196+
.572091+	117.0098+	2.535852+	5.660313+	.0022218+
18.39414+	12.12680+	2.060083+	.3639523+	.0251559-
1.747612+	5.660313+	15.0	1.049	

2218.106+	.0000000+	.0300000+	.002215	2021.9
3.490216+	.2311853+	.0326640+	15.09705+	294.4371+
.5324274+	117.0098+	2.516345+	6.555290+	.0022226+
17.24209+	11.28371+	2.277573+	.3474405+	.0093587+
1.878190+	6.555290+	15.0	1.048	

2219.106+	2.500000+	.0300000+	.002215	2021.9
3.414342+	.3518527+	.1172076+	9.703894+	296.9932+
.5605508+	117.0098+	2.538190+	6.091047+	.0022193+
18.02363+	11.87972+	2.187908+	.3592006+	.0343280+
1.783959+	6.091047+	15.0	1.049	

2220.106+	2.500000+	.0300000+	.002206	2021.9
2.621218+	.3137917+	.0816137+	8.353370+	296.9932+
.4200867+	135.3674+	2.193978+	6.239708+	.0022177+
18.02199+	11.87050+	1.845816+	.2958176+	.0311357+
2.380460+	6.239708+	20.0	1.049	

G.E.M.
FORCE

2221.106+	.0000000+	.0300000+	.002202	2021.9
2.742143+	.2368239+	.0260605+	11.57082+	294.7086+
.4087578+	135.4940+	2.175066+	6.708478+	.0022185+
17.66585+	11.55038+	1.946497+	.2901548+	.0095037+
2.446435+	6.708478+	20.0	1.048	
2222.106+	2.500000-	.0300000+	.002199	2021.9
2.521633+	.1446317+	.0595379-	17.43485+	296.9932+
.4370599+	135.6206+	2.189881+	5.769537+	.0022177+
18.75015+	12.35012+	1.754717+	.3041348+	.0236108-
2.288015+	5.769537+	20.0	1.049	
2223.106+	2.500000-	.0300000+	.002183	2021.9
1.806756+	.1979171+	.0367381-	9.128848+	294.7086+
.2917231+	166.7251+	1.767631+	6.193392+	.0022162+
18.93116+	12.36495+	1.398717+	.7258403+	.0203337-
3.427907+	6.193392+	30.0	1.048	
2224.106+	.0000000+	.0300000+	.002179	2021.9
2.013039+	.2418987+	.0062854+	8.321824+	294.7086+
.2779055+	166.8794+	1.765997+	7.243661+	.0022177+
18.02199+	11.77919+	1.575266+	.2174683+	.0031223+
3.598370+	7.243661+	30.0	1.048	
2225.106+	2.500000+	.0300000+	.002177	2021.9
1.927880+	.2757307+	1.400998-	6.991169+	294.9799+
.2007528+	167.0336+	1.765991+	6.866111+	.0022129+
18.22977+	11.89996+	1.505115+	.2192092+	.7267795-
3.561851+	6.866111+	30.0	1.048	
2226.106+	2.500000+	.0300000+	.002158	2021.9
1.568463+	.2685414+	.0493438+	5.840674+	296.9932+
.2144498+	193.6045+	1.534019+	7.313892+	.0022162+
18.41269+	12.11953+	1.291501+	.1765819+	.0314599+
4.663094+	7.313892+	40.0	1.049	
2227.106+	.0000000+	.0300000+	.002152	2021.9
1.616477+	.2571231+	.0046916+	6.286782+	294.7086+
.2082657+	193.9588+	1.519439+	7.761611+	.0022162+
18.02033+	11.77004+	1.337849+	.1723674+	.0029024+
4.801558+	7.761611+	40.0	1.048	
2228.106+	2.500000-	.0300000+	.002147	2021.9
1.474213+	.2215995+	.0396644-	6.652599+	294.7086+
.2207357+	194.1357+	1.518054+	6.678634+	.0022155+
19.10506+	12.47478+	1.207643+	.1808218+	.0269054-
4.530303+	6.678634+	40.0	1.048	

G.E.M.
FORCE

2229.106+	.0000000+	.0100000+	.002195	2021.2
.4267927+	.2503567+	.0035316+	1.704738+	.0001135+
.0000000+	96.00282+	.0000011+	0000000+	.0021954+
.0000000+	.0000000+	.4267927+	.0000000+	.0002749+
0000000+	0000000+	10.0	1.000	

2230.106+	.0000000+	.0100000+	.002194	2021.2
.4267927+	.2706559+	.0256793+	1.576882+	.0001135+
.0000000+	117.5851+	.0000009+	0000000+	.0021954+
.0000000+	.0000000+	.4267927+	.0000000+	.0601631+
0000000+	0000000+	15.0	1.000	

2231.106+	.0000000+	.0100000+	.002187	2021.2
.4303493+	.2452819+	.0097239+	1.754508+	.0001138+
.0000000+	136.0353+	.0000008+	0000000+	.0021889+
.0000000+	.0000000+	.4303493+	.0000000+	.0225955+
0000000+	0000000+	20.0	1.000	

2232.106+	.0000000+	.0100000+	.002176	2021.2
.4315349+	.2458458+	.0104099+	1.755306+	.0001141+
.0000000+	167.0804+	.0000006+	0000000+	.0021761+
.0000000+	.0000000+	.4315349+	.0000000+	.0241229+
0000000+	0000000+	30.0	1.000	

2233.106+	.0000000+	.0100000+	.002161	2021.2
.4427974+	.2452819+	.0174817+	1.805258+	.0001144+
.0000000+	193.4813+	.0000005+	0000000+	.0021642+
.0000000+	.0000000+	.4427974+	.0000000+	.0394803+
0000000+	0000000+	40.0	1.000	

2235.106+	.0000000+	.0100000+	.002194	2021.2
7.433307+	.2503567+	.0731694+	29.69085+	295.6227+
.3638896+	96.00114+	3.079366+	20.42736+	.0022514+
7.724526+	5.141264+	5.450079+	.2668028+	.0098434+
2.748085+	20.42736+	10.0	1.049	

2236.106+	.0000000+	.0100000+	.002194	2021.2
5.102544+	.2452819+	.0477083+	21.24226+	295.8973+
.2428184+	117.5709+	2.516583+	21.01382+	.0022478+
7.738884+	5.140040+	4.105623+	.1953772+	.0093499+
4.118303+	21.01382+	15.0	1.049	

2237.106+	.0000000+	.0100000+	.002182	2021.2
4.843861+	.2410529+	.0460616+	16.77582+	294.1654+
.1810479+	136.1543+	2.160529+	22.33586+	.0022489+
7.767599+	5.115920+	3.423960+	.1532943+	.0113985+
5.523359+	22.33586+	20.0	1.048	

G.E.M.
FORCE

2238.106+	.0000000+	.0100000+	.002171	2021.2
2.921159+	.2441542+	.0213406+	11.96440+	296.7196+
.1282687+	167.2256+	1.774366+	22.77373+	.0022340+
8.201642+	5.436788+	2.589063+	.1136063+	.007355+
7.796130+	22.77373+	30.0	1.049	

2239.106+	.0000000+	.0100000+	.002151	2021.2
2.326020+	.2418987+	.0087450+	9.615677+	296.7196+
.0962015+	193.9927+	1.529539+	24.17861+	.0022340+
8.201642+	5.436788+	2.121891+	.0877590+	.0037596+
10.39484+	24.17861+	40.0	1.049	

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT

AND A JET CONVERGENCE ANGLE OF 30°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP
C_L	C_D	C_M	L/D	V_j
C_{μ}	V_o	V_j/V_o	A	ρ_l
Q	ΔV_j	C_L'	C_{μ}'	C_M/C_L
l/C_{μ}	A	q	P_M/P_o	

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University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M.
FORCE

2240.103+	2.500000+	.2500000+	.002337	2050.9
.1920567+	.2503567+	.0391035-	.7671321+	.0001108+
.0000000+	92.96920+	.0000011+	0000000+	.0023421+
.0000000+	.0000000+	.1920567+	.0000000+	.2036039-
0000000+	0000000+	10.0	1.000	
2241.103+	.0000000+	.2500000+	.002333	2050.9
.0426792+	.2249827+	.0848937-	.1897001+	.0001109+
.0000000+	93.06012+	.0000011+	0000000+	.0023375+
.0000000+	.0000000+	.0426792+	.0000000+	1.989108-
0000000+	0000000+	10.0	1.000	
2242.103+	2.500000-	.2500000+	.002333	2050.9
.0071132+	.1996087+	.1291258-	.0356357+	.0001109+
.0000000+	93.06012+	.0000011+	0000000+	.0023375+
.0000000+	.0000000+	.0071132+	.0000000+	18.15295-
0000000+	0000000+	10.0	1.000	
2243.103+	2.500000-	.2500000+	.002327	2050.9
.0237107+	.2052474+	.1478920-	.1155225+	.0001110+
.0000000+	114.0920+	.0000009+	0000000+	.0023330+
.0000000+	.0000000+	.0237107+	.0000000+	6.237351-
0000000+	0000000+	15.0	1.000	
2244.103+	.0000000+	.2500000+	.002322	2050.9
.0663899+	.2300575+	.0936328-	.2885798+	.0001111+
.0000000+	114.2032+	.0000009+	0000000+	.0023284+
.0000000+	.0000000+	.0663899+	.0000000+	1.410345-
0000000+	0000000+	15.0	1.000	
2245.103+	2.500000+	.2500000+	.002313	2050.9
.1896856+	.2548677+	.0324297-	.7442514+	.0001113+
.0000000+	114.4251+	.0000009+	0000000+	.0023194+
.0000000+	.0000000+	.1896856+	.0000000+	.1709658-
0000000+	0000000+	15.0	1.000	
2246.103+	2.500000+	.2500000+	.002311	2050.9
.1991699+	.2368239+	.0635049-	.8410041+	.0001114+
.0000000+	132.2616+	.0000008+	0000000+	.0023149+
.0000000+	.0000000+	.1991699+	.0000000+	.3188431-
0000000+	0000000+	20.0	1.000	
2247.103+	.0000000+	.2500000+	.002311	2050.9
.0746887+	.2139873+	.1054558-	.3490333+	.0001114+
.0000000+	132.2616+	.0000008+	0000000+	.0023149+
.0000000+	.0000000+	.0746887+	.0000000+	1.411937-
0000000+	0000000+	20.0	1.000	

G.B.M.
FORCE

2248.103+ .0106698- .0000000+ .0000000+ 0000000+	2.500000- .1911507+ 132.3894+ .0000000+ 0000000+	.2500000+ .1337305- .0000008+ .0106698- 20.0	.002306 .0558188- 0000000+ .0000000+ 1.000	2050.9 .0001115+ .0023104+ 12.53353+
2249.103+ .0142264- .0000000+ .0000000+ 0000000+	2.500000- .2029919+ 162.6205+ .0000000+ 0000000+	.2500000+ .1335137- .0000006+ .0142264- 30.0	.002295 .0700836- 0000000+ .0000000+ 1.000	2050.9 .0001118+ .0022971+ 9.384908+
2250.103+ .0853585+ .0000000+ .0000000+ 0000000+	.0000000+ .2182163+ 162.9324+ .0000000+ 0000000+	.2500000+ .1082393- .0000006+ .0853585+ 30.0	.002288 .3911647+ 0000000+ .0000000+ 1.000	2050.9 .0001121+ .0022883+ 1.268655-
2251.103+ .1991699+ .0000000+ .0000000+ 0000000+	2.500000+ .2379517+ 163.0881+ .0000000+ 0000000+	.2500000+ .0702237- .0000006+ .1991699+ 30.0	.002283 .8370183+ 0000000+ .0000000+ 1.000	2050.9 .0001122+ .0022840+ .3525822-
2252.103+ .1920567+ .0000000+ .0000000+ 0000000+	2.500000+ .2364010+ 188.8660+ .0000000+ 0000000+	.2500000+ .0758659- .0000005+ .1920567+ 40.0	.002269 .8124190+ 0000000+ .0000000+ 1.000	2050.9 .0001125+ .0022710+ .3950183-
2253.103+ .0800236+ .0000000+ .0000000+ 0000000+	.0000000+ .2215995+ 189.0451+ .0000000+ 0000000+	.2500000+ .1080279- .0000005+ .0800236+ 40.0	.002265 .3611182+ 0000000+ .0000000+ 1.000	2050.9 .0001126+ .0022667+ 1.349950-
2254.103+ .0391226- .0000000+ .0000000+ 0000000+	2.500000- .2139873+ 189.4028+ .0000000+ 0000000+	.2500000+ .1289148- .0000005+ .0391226- 40.0	.002256 .1828269- 0000000+ .0000000+ 1.000	2050.9 .0001128+ .0022581+ 3.295144+
2258.103+ .5619438+ 1.246904+ 26.44853+ .8019863+	2.500000- .3450863+ 93.59735+ 17.61705+ .4506712+	.2500000+ .0498483+ 3.122482+ .2500069+ 10.0	.002307 1.628414+ .4506712+ .5549451+ 1.048	2050.9 292.2561+ .0022791+ .0887069+

G.E.M.
FORCE

2259.103+	.0000000+	.2500000+	.002305	2050.9
.7824534+	.4161335+	.0632208+	1.880293+	293.0759+
1.236873+	93.68765+	3.128223+	.6326058+	.0022656+
26.31829+	17.47533+	.3497978+	.5529474+	.0807982+
.8084901+	.6326058+	10.0	1.048	

2260.103+	2.500000+	.2500000+	.002300	2050.9
.8962648+	.4939471+	.0611010+	1.814495+	295.3478+
1.256848+	93.77787+	3.149440+	.7131047+	.0022663+
26.52861+	17.75755+	.3971310+	.5569042+	.0681730+
.7956406+	.7131047+	10.0	1.049	

2261.103+	2.500000+	.2500000+	.002296.	2050.9
.8203905+	.4567319+	.0598534+	1.796218+	295.3478+
.8331383+	114.9663+	2.568994+	.9846990+	.0022663+
26.37788+	17.65666+	.4475333+	.4544874+	.0729572+
1.200280+	.9846990+	15.0	1.049	

2262.103+	.0000000+	.2500000+	.002296	2050.9
.7208055+	.3935789+	.0317659+	1.831413+	293.3486+
.8317977+	114.9663+	2.551605+	.8665635+	.0022621+
26.56428+	17.62825+	.3934962+	.4540881+	.0440701+
1.202215+	.8665635+	15.0	1.048	

2263.103+	2.500000-	.2500000+	.002294	2050.9
.5453463+	.3563637+	.0276949+	1.530308+	293.3486+
.8348068+	115.0766+	2.549159+	.6532604+	.0022621+
26.66038+	17.69202+	.2972227+	.4549834+	.0507841+
1.197881+	.6532604+	15.0	1.048	

2264.103+	2.500000-	.2500000+	.002289	2050.9
.5228211+	.3163291+	.0049374-	1.652775+	295.8973+
.6328455+	133.0085+	2.224649+	.8261433+	.0022579+
26.76495+	17.88249+	.3201901+	.3875722+	.0094437-
1.580164+	.8261433+	20.0	1.049	

2265.103+	.0000000+	.2500000+	.002284	2050.9
.6686420+	.3738435+	.0310959+	1.788560+	295.8973+
.6286179+	133.1356+	2.222525+	1.063664+	.0022579+
26.58615+	17.76302+	.4105579+	.3859824+	.0465060+
1.590791+	1.063669+	20.0	1.049	

G.E.M.
FORCE

2266.103+	2.500000+	.2500000+	.002284	2050.9
.7682269+	.4372785+	.0432680+	1.756836+	296.1716+
.6269222+	133.1356+	2.224586+	1.225394+	.0022530+
26.54802+	17.71511+	.4721964+	.3853424+	.0563219+
1.595094+	1.225394+	20.0	1.049	
2267.103+	2.500000+	.2500000+	.002266	2050.9
.6852394+	.4093671+	.0452604+	1.673899+	294.1654+
.4123150+	163.6840+	1.797154+	1.661931+	.0022481+
26.42662+	17.47635+	.4851888+	.2919427+	.0660505+
2.425329+	1.661931+	30.0	1.048	
2268.103+	.0000000+	.2500000+	.002266	2050.9
.5880255+	.3580553+	.0160109+	1.642275+	296.4457+
.4228962+	163.6840+	1.811085+	1.390472+	.0022496+
26.87807+	17.92484+	.4132596+	.2972080+	.0272283+
2.364646+	1.390472+	30.0	1.049	
2269.103+	2.500000-	.2500000+	.002257	2050.9
.4671009+	.3146375+	.0051124-	1.484568+	293.8934+
.4183938+	163.9937+	1.792101+	1.116414+	.0022522+
26.79144+	17.73400+	.3293168+	.2949772+	.0109449-
2.390092+	1.116414+	30.0	1.048	
2270.103+	2.500000-	.2500000+	.002233	2050.9
.4250144+	.3011047+	.0206969-	1.411516+	296.4457+
.3204302+	190.2646+	1.558071+	1.326386+	.0022488+
27.16337+	18.10897+	.3218757+	.2426710+	.0486971-
3.120803+	1.326386+	40.0	1.049	
2271.103+	.0000000+	.2500000+	.002227	2050.9
.5548305+	.3273245+	.0338710-	1.695047+	294.1654+
.3200668+	190.6199+	1.543204+	1.733483+	.0023190+
26.51542+	18.08843+	.4203049+	.2424626+	.0610474-
3.124347+	1.733483+	40.0	1.048	
2272.103+	2.500000+	.2500000+	.002223	2050.9
.6455240+	.3687687+	.0024986-	1.750484+	294.1654+
.3160256+	190.7973+	1.541769+	2.042632+	.0023190+
26.18063+	17.86004+	.4905102+	.2401363+	.0038707-
3.164300+	2.042632+	40.0	1.048	
2273.103+	5.000000+	.1500000+	.002289	2050.9
.3272077+	.3281703+	.0466725+	.9370668+	.0001121+
.0000000+	94.05772+	.0000011+	.0000000+	.0022883+
.0000000+	.0000000+	.3272077+	.0000000+	.1426338+
0000000+	0000000+	10.0	1.000	

G.E.M.
FORCE

2274.103+ .1778303+ .0000000+ .0000000+ 0000000+	2.500000+ .2723475+ 94.14760+ .0000000+ 0000000+	.1500000+ .0060579- .0000011+ .1778303+ 10.0	.002284 .6529535+ 0000000+ .0000000+ 1.000	2050.9 .0001122+ .0022840+ .0340659-
2275.103+ .0640189+ .0000000+ .0000000+ 0000000+	.0000000+ .2385155+ 94.14760+ .0000000+ 0000000+	.1500000+ .0644829- .0000011+ .0640189+ 10.0	.002284 .2684055+ 0000000+ .0000000+ 1.000	2050.9 .0001122+ .0022840+ 1.007248-
2276.103+ .1707171- .0000000+ .0000000+ 0000000+	2.500000- .2486651+ 94.14760+ .0000000+ 0000000+	.1500000+ .0887440- .0000011+ .1707171- 10.0	.002284 .6865340- 0000000+ .0000000+ 1.000	2050.9 .0001122+ .0022840+ .5198308+
2277.103+ .0497924- .0000000+ .0000000+ 0000000+	5.000000- .2215995+ 94.14760+ .0000000+ 0000000+	.1500000+ .1623673- .0000011+ .0497924- 10.0	.002284 .2246957- 0000000+ .0000000+ 1.000	2050.9 .0001122+ .0022840+ 3.260880+
2278.103+ .0663899- .0000000+ .0000000+ 0000000+	5.000000- .2379517+ 115.4187+ .0000000+ 0000000+	.1500000+ .1410221- .0000009+ .0663899- 15.0	.002279 .2790061- 0000000+ .0000000+ 1.000	2050.9 .0001123+ .0022796+ 2.124148+
2279.103+ .1185535- .0000000+ .0000000+ 0000000+	2.500000- .2492290+ 115.5286+ .0000000+ 0000000+	.1500000+ .1184004- .0000009+ .1185535- 15.0	.002272 .4756810- 0000000+ .0000000+ 1.000	2050.9 .0001124+ .0022753+ .9987087+
2280.103+ .0474214+ .0000000+ .0000000+ 0000000+	.0000000+ .2481013+ 115.5286+ .0000000+ 0000000+	.1500000+ .0875085- .0000009+ .0474214+ 15.0	.002272 .1911373+ 0000000+ .0000000+ 1.000	2050.9 .0001124+ .0022753+ 1.845337-
2281.103+ .2086542+ .0000000+ .0000000+ 0000000+	2.500000+ .2762946+ 115.5286+ .0000000+ 0000000+	.1500000+ .0240415- .0000009+ .2086542+ 15.0	.002272 .7551874+ 0000000+ .0000000+ 1.000	2050.9 .0001124+ .0022753+ .1152220-

G.E.M.
FORCE

2282.103+ .3509184+ .0000000+ .0000000+ 0000000+	5.000000+ .3315535+ 115.5286+ .0000000+ 0000000+	.1500000+ .0326809+ .0000009+ .3509184+ 15.0	.002272 1.058406+ 0000000+ .8000000+ 1.000	2050.9 .0001124+ .0022753+ .0931298+ 2050.9
2283.103+ .3449908+ .0000000+ .0000000+ 0000000+	5.000000+ .3205581+ 133.5346+ .0000000+ 0000000+	.1500000+ .0298502+ .0000008+ .3449908+ 20.0	.002269 1.076219+ 0000000+ .0000000+ 1.000	2050.9 .0001125+ .0022710+ .0865248+ 2050.9
2284.103+ .2169529+ .0000000+ .0000000+ 0000000+	2.500000+ .2655811+ 133.6612+ .0000000+ 0000000+	.1500000+ .0352925- .0000008+ .2169529+ 20.0	.002265 .8168989+ 0000000+ .0000000+ 1.000	2050.9 .0001126+ .0022667+ .1626736- 2050.9
2285.103+ .0533490+ .0000000+ .0000000+ 0000000+	.0000000+ .2334407+ 133.7877+ .0000000+ 0000000+	.1500000+ .0847665- .0000008+ .0533490+ 20.0	.002260 .2285337+ 0000000+ .0000000+ 1.000	2050.9 .0001127+ .0022624+ 1.588902- 2050.9
2286.103+ .1102547- .0000000+ .0000000+ 0000000+	2.500000- .2325949+ 133.9141+ .0000000+ 0000000+	.1500000+ .1202937- .0000008+ .1102547- 20.0	.002256 .4740205- 0000000+ .0000000+ 1.000	2050.9 .0001128+ .0022581+ 1.091052+ 2050.9
2287.103+ .1244812- .0000000+ .0000000+ 0000000+	5.000000- .2334407+ 133.9141+ .0000000+ 0000000+	.1500000+ .1441434- .0000008+ .1244812- 20.0	.002256 .5332454- 0000000+ .0000000+ 1.000	2050.9 .0001128+ .0022581+ 1.157953+ 2050.9
2288.103+ .1232956- .0000000+ .0000000+ 0000000+	5.000000- .2475374+ 164.3283+ .0000000+ 0000000+	.1500000+ .1368583- .0000006+ .1232956- 30.0	.002246 .4980890- 0000000+ .0000000+ 1.000	2050.9 .0001130+ .0022496+ 1.110001+ 2050.9
2289.103+ .1066981- .0000000+ .0000000+ 0000000+	2.500000- .2351323+ 164.4827+ .0000000+ 0000000+	.1500000+ .1328073- .0000006+ .1066981- 30.0	.002244 .4537792- 0000000+ .0000000+ 1.000	2050.9 .0001131+ .0022454+ 1.244700+ 2050.9

G.E.M.
FORCE

2290.103+	.000000+	.1500000+	.002237	2050.9
.0616478+	.2351323+	.1042215-	.2621835+	.0001132+
.0000000+	164.6369+	.0000006+	0000000+	.0022412+
.0000000+	.0000000+	.0616478+	.0000000+	1.690594-
0000000+	0000000+	30.0	1.000	

2291.103+	2.500000+	.1500000+	.002237	2050.9
.2228806+	.2638895+	.0755053-	.8445982+	.0001132+
.0000000+	164.6369+	.0000006+	0000000+	.0022412+
.0000000+	.0000000+	.2228806+	.0000000+	.3387702-
0000000+	0000000+	30.0	1.000	

229 .103+	5.000000+	.1500000+	.002237	2050.9
.3627738+	.3180207+	.0083444+	1.140723+	.0001132+
.0000000+	164.6369+	.0000006+	0000000+	.0022412+
.0000000+	.0000000+	.3627738+	.0000000+	.0230017+
0000000+	0000000+	30.0	1.000	

2293.103+	5.000000+	.1500000+	.002222	2050.9
.3574389+	.3150604+	.0052848+	1.134509+	.0001137+
.0000000+	190.8368+	.0000005+	0000000+	.0022245+
.0000000+	.0000000+	.3574389+	.0000000+	.0147854+
0000000+	0000000+	40.0	1.000	

2294.103+	2.500000+	.1500000+	.002218	2050.9
.2205095+	.2575460+	.0634781-	.8561947+	.0001138+
.0000000+	191.0140+	.0000005+	0000000+	.0022204+
.0000000+	.0000000+	.2205095+	.0000000+	.2878700-
0000000+	0000000+	40.0	1.000	

2295.103+	.0000000+	.1500000+	.002213	2050.9
.0533490+	.2389384+	.1005474-	.2232754+	.0000113+
.0000000+	191.1911+	.0000000+	0000000+	.0022163+
.0000000+	.0000000+	.0533490+	.0000000+	1.884708-
0000000+	0000000+	40.0	1.000	

2296.103+	2.500000-	.1500000+	.002213	2050.9
.1102547-	.2385155+	.1325715-	.4622540-	.0001139+
.0000000+	191.1911+	.0000005+	0000000+	.0022163+
.0000000+	.0000000+	.1102547-	.0000000+	1.202410+
0000000+	0000000+	40.0	1.000	

2297.103+	5.000000-	.1500000+	.002209	2050.9
.1475991-	.2473964+	.1493093-	.5966098-	.0001140+
.0000000+	191.3681+	.0000005+	0000000+	.0022122+
.0000000+	.0000000+	.1475991-	.0000000+	1.011586+
0000000+	0000000+	40.0	1.000	

G.E.M.
FORCE

2303.103+	5.000000+	.1500000+	.002328	2050.9
1.066921+	.4076755+	.0160886-	2.617232+	294.2457+
1.280617+	93.14614+	3.158969+	.8331779+	.0023546+
26.11473+	18.09337+	.4678478+	.5615221+	.0150786-
.7808734+	.0331779+	10.0	1.049	
2304.103+	2.500000+	.1500000+	.002328	2050.9
1.308831+	.4093671+	.0381865-	3.197205+	294.5216+
1.268870+	93.14614+	3.161931+	1.031493+	.0023502+
25.89945+	17.92740+	.5768646+	.5592520+	.0291760-
.7881026+	1.031493+	10.0	1.049	
2305.103+	.0000000+	.1500000+	.002323	2050.9
1.173680+	.3450863+	.0688025-	3.401119+	294.5216+
1.268870+	93.23688+	3.158853+	.9249803+	.0023509+
25.89093+	17.92740+	.5172971+	.5592520+	.0586211-
.7881026+	.9249803+	10.0	1.049	
2306.103+	2.500000-	.1500000+	.002323	2050.9
.9958497+	.2824971+	.1297917-	3.525167+	292.2561+
1.265533+	93.23688+	3.134555+	.7869010+	.0023486+
26.04872+	17.88026+	.4395651+	.5586029+	.1303326-
.7901804+	.7869010+	10.0	1.048	
2307.103+	5.000000-	.1500000+	.002323	2050.9
.7966798+	.2080667+	.0789139-	3.828962+	292.2561+
1.265533+	93.23688+	3.134555+	.6295208+	.0023494+
26.04015+	17.88026+	.3516521+	.5586029+	.0990534-
.7901804+	.6295208+	10.0	1.048	
2308.103+	5.000000-	.1500000+	.002319	2050.9
.7113212+	.2481013+	.1017807-	2.867059+	291.9823+
.8514561+	114.3043+	2.554428+	.8354173+	.0023530+
26.26390+	18.04487+	.3841955+	.4598845+	.1430869-
1.174458+	.8354173+	15.0	1.048	
2309.103+	2.500000-	.1500000+	.002319	2050.9
.8630698+	.3112543+	.0437779-	2.772876+	292.2561+
.8436891+	114.3043+	2.556823+	1.022971+	.0023494+
26.04015+	17.88026+	.4581211+	.4576092+	.0507235-
1.185270+	1.022971+	15.0	1.048	
2310.103+	.0000000+	.1500000+	.002314	2050.9
1.029044+	.3766629+	.0077783-	2.732004+	292.2561+
.8351238+	114.4153+	2.554344+	1.232206+	.0023494+
25.77578+	17.69874+	.5607495+	.4550776+	.0075588-
1.197427+	1.232206+	15.0	1.048	

G.E.M.
FORCE

2311.103+	2.500000+	.1500000+	.002314	2050.9
1.161824+	.4443268+	.0406103+	2.614797+	294.7973+
.8423852+	114.4153+	2.576554+	1.379208+	.0023458+
25.81556+	17.85263+	.6306090+	.4572253+	.0349539+
1.187105+	1.379208+	15.0	1.049	
2312.103+	5.000000+	.1500000+	.002314	2050.9
1.251925+	.4939471+	.0791106+	2.534533+	292.8029+
.8323955+	114.4153+	2.559123+	1.504003+	.0023406+
25.73964+	17.64092+	.6832179+	.4542662+	.0631911+
1.201351+	1.504003+	20.0	1.048	
2313.103+	5.000000+	.1500000+	.002307	2050.9
1.177236+	.4981761+	.0890291+	2.363093+	292.2561+
.6167068+	132.3757+	2.207776+	1.908908+	.0023494+
25.37923+	17.42645+	.7231695+	.3814586+	.0756255+
1.621516+	1.908908+	20.0	1.048	
2314.103+	2.500000+	.1500000+	.002305	2050.9
1.045642+	.4237457+	.0050462+	2.467617+	294.7973+
.6285490+	132.5034+	2.224826+	1.663581+	.0023450+
25.69162+	17.76108+	.6420698+	.3859564+	.0048260+
1.590965+	1.663581+	20.0	1.049	
2315.103+	.0000000+	.1500000+	.002305	2050.9
.9140478+	.3721519+	.0124087-	2.456114+	293.0759+
.6280997+	132.5034+	2.211835+	1.455258+	.0023363+
25.92059+	17.74838+	.5614200+	.3857870+	.0135755-
1.592103+	1.455258+	20.0	1.048	
2316.103+	2.500000-	.1500000+	.002300	2050.9
.7646703+	.3214039+	.0231007-	2.379156+	295.0727+
.6388650+	132.6310+	2.224762+	1.196919+	.0023414+
26.12908+	18.05258+	.4565853+	.3898216+	.0302100-
1.565275+	1.196919+	20.0	1.049	
2317.103+	5.000000-	.1500000+	.002300	2050.9
.6046230+	.2664269+	.0383095-	2.269376+	292.5296+
.6365741+	132.6310+	2.205588+	.9498078+	.0023450+
26.22135+	17.98784+	.3694443+	.3889674+	.0633611-
1.570909+	.9498078+	20.0	1.048	
2318.103+	5.000000-	.1500000+	.002283	2050.9
.5121513+	.2802417+	.0163913-	1.327534+	292.2561+
.4197032+	163.0712+	1.722199+	1.220270+	.0022791+
26.70743+	17.78950+	.3607453+	.2956274+	.0320049-
2.382635+	1.220270+	30.0	1.048	

G.E.M.
FORCE

2319.103+	2.500000-	.1500000+	.002283	2050.9
.6473023+	.3191435+	.0076197-	2.028216+	292.8029+
.4161977+	163.0712+	1.795552+	1.555275+	.0022706+
26.53391+	17.64092+	.4570705+	.2738839+	.0117715-
2.402703+	1.555275+	30.0	1.048	
2320.103+	.0000000+	.1500000+	.002279	2050.9
.7895666+	.3542578+	.0248884+	2.167603+	292.8029+
.4119070+	163.2267+	1.793841+	1.516856+	.0022706+
26.26037+	17.45905+	.5592199+	.2717380+	.0315216+
2.427732+	1.916856+	30.0	1.048	
2321.103+	2.500000+	.1500000+	.002272	2050.9
.9129755+	.4172612+	.0556850+	2.204794+	295.3478+
.4089952+	163.3821+	1.807711+	2.249355+	.0022663+
25.89828+	17.33563+	.6529302+	.2902743+	.0713987+
2.445016+	2.249355+	30.0	1.049	
2322.103+	5.000000+	.1500000+	.002272	2050.9
1.055126+	.4787227+	.1094478+	2.204045+	295.0727+
.4064522+	163.3821+	1.306027+	2.595942+	.0022706+
25.71328+	17.22784+	.7502043+	.2889911+	.1037295+
2.460313+	2.595942+	30.0	1.049	
2323.103+	5.000000+	.1500000+	.002256	2050.9
.3816233+	.4567319+	.0701669+	2.149232+	295.3478+
.3018774+	163.3832+	1.559524+	3.251728+	.0022656+
25.49584+	17.06046+	.7540059+	.2318785+	.0918548+
3.312602+	3.251728+	40.0	1.049	
2324.103+	2.500000+	.1500000+	.002251	2050.9
.8464723+	.3741427+	.0150925+	2.147628+	295.0727+
.3064606+	163.5618+	1.556604+	2.762091+	.0022698+
25.85882+	17.31948+	.6479126+	.2345732+	.0532711+
3.263061+	2.762091+	40.0	1.049	
2325.103+	.0000000+	.1500000+	.002246	2050.9
.7077646+	.3552359+	.0220366+	1.592378+	295.6227+
.3119054+	163.7402+	1.558039+	2.269164+	.0022614+
26.36730+	17.62719+	.5394936+	.2377499+	.0311355+
3.206100+	2.269164+	40.0	1.049	
2326.103+	2.500000-	.1500000+	.002246	2050.9
.5858400+	.3133688+	.0110626-	1.872681+	293.0759+
.3124393+	163.7402+	1.544616+	1.878252+	.0022648+
26.60146+	17.65736+	.5471368+	.2380600+	.0188512-
3.200620+	1.878252+	40.0	1.048	

G.E.M.
FORCE

2327.103+ .4499107+ .3172709+ 27.00366+ 3.151880+	5.000000- .2816513+ 189.9184+ 17.93042+ 1.418064+	.1500000+ .0139614- 1.543167+ .3415475+ 40.0	.002244 1.597402+ 1.410064+ .2408547+ 1.048	2050.9 293.0759+ .0022656+ .0310316-
2328.103+ .3912267+ .0000000+ .0000000+ 0000000+	5.000000+ .3467779+ 93.44896+ .0000000+ 0000000+	.1000000+ .0746645+ .0000011+ .3912267+ 10.0	.002315 1.128176+ 0000000+ .0000000+ 1.000	2053.8 .0001114+ .0023149+ .1908473+
2329.103+ .3841134+ .0000000+ .0000000+ 0000000+	2.500000+ .2926467+ 93.53931+ .0000000+ 0000000+	.1000000+ .0291341+ .0000011+ .3841134+ 10.0	.002310 1.312549+ 0000000+ .0000000+ 1.000	2053.8 .0001115+ .0023104+ .0758476+
2330.103+ .0497924+ .0000000+ .0000000+ 0000000+	.0000000+ .2588147+ 93.62956+ .0000000+ 0000000+	.1000000+ .0410699- .0000011+ .0497924+ 10.0	.002308 .1923865+ 0000000+ .0000000+ 1.000	2053.8 .0001116+ .0023060+ .8248231-
2331.103+ .2062831- .0000000+ .0000000+ 0000000+	2.500000- .2689643+ 93.62956+ .0000000+ 0000000+	.1000000+ .0700034- .0000011+ .2062831- 10.0	.002308 .7669535- 0000000+ .0000000+ 1.000	2053.8 .0001116+ .0023060+ .3393559+
2332.103+ .1778303- .0000000+ .0000000+ 0000000+	5.000000- .2689643+ 93.62956+ .0000000+ 0000000+	.1000000+ .0700034- .0000011+ .1778303- 10.0	.002308 .6611666- 0000000+ .0000000+ 1.000	2053.8 .0001116+ .0023060+ .4407250+
2333.103+ .1612328- .0000000+ .0000000+ 0000000+	5.000000- .2661450+ 114.7886+ .0000000+ 0000000+	.1000000+ .0898212- .0000004+ .1612328- 15.0	.002302 .6058080- 0000000+ .0000000+ 1.000	2053.8 .0001117+ .0023015+ .5570903+
2334.103+ .1754592- .0000000+ .0000000+ 0000000+	2.500000- .2661450+ 114.7886+ .0000000+ 0000000+	.1000000+ .0812576- .0000003+ .1754592- 15.0	.002302 .6592617- 0000000+ .0000000+ 1.000	2053.8 .0001117+ .0023015+ .4631026+

G.E.M.
FORCE

2335.103+	.0000000+	.1000000+	.002298	2053.8
.0474214+	.2582509+	.0472334-	.1336253+	.0001118+
.0000000+	114.8989+	.0000009+	0000000+	.0022971+
.0000000+	.0000000+	.0474214+	.0000000+	.9960364-
0000000+	0000000+	15.0	1.000	
2336.103+	2.500000+	.1000000+	.002298	2053.8
.2750442+	.2886997+	.0095450+	.9527000+	.0001118+
.0000000+	114.8989+	.0000009+	0000000+	.0022971+
.0000000+	.0000000+	.2750442+	.0000000+	.0347035+
0000000+	0000000+	15.0	1.000	
2337.103+	5.000000+	.1000000+	.002296	2053.8
.4267927+	.3439586+	.0693175+	1.2140825+	.0001119+
.0000000+	115.0092+	.0000009+	0000000+	.0022927+
.0000000+	.0000000+	.4267927+	.0000000+	.1624149+
0000000+	0000000+	15.0	1.000	
2338.103+	5.000000+	.1000000+	.002291	2053.8
.4267927+	.3400115+	.1079252-	1.255230+	.0001121+
.0000000+	132.9352+	.0000008+	0000000+	.0022915+
.0000000+	.0000000+	.4267927+	.0000000+	.2528750-
0000000+	0000000+	20.0	1.000	
2339.103+	2.500000+	.1000000+	.002291	2053.8
.2703020+	.2841887+	.0341652+	.9511356+	.0001121+
.0000000+	132.9352+	.0000008+	0000000+	.0022915+
.0000000+	.0000000+	.2703020+	.0000000+	.1263964+
0000000+	0000000+	20.0	1.000	
2340.103+	.0000000+	.1000000+	.002291	2053.8
.0391226+	.2452819+	.0262932-	.1595007+	.0001121+
.0000000+	132.9352+	.0000008+	0000000+	.0022915+
.0000000+	.0000000+	.0391226+	.0000000+	.6720709-
0000000+	0000000+	20.0	1.000	
2341.103+	2.500000-	.1000000+	.002286	2053.8
.1778303-	.2486651+	.0450395-	.7151396-	.0001122+
.0000000+	133.0622+	.0000008+	0000000+	.0022871+
.0000000+	.0000000+	.1778303-	.0000000+	.2532724+
0000000+	0000000+	20.0	1.000	
2342.103+	.0000000-	.1000000+	.002286	2053.8
.1458208+	.2537399+	.0577028-	.5743861+	.0001122+
.0000000+	133.0622+	.0000008+	0000000+	.0022871+
.0000000+	.0000000+	.1458208+	.0000000+	.3957102-
0000000+	0000000+	20.0	1.000	

G.E.M.
FORCE

2343.103+ .1802013- .0000000+ .0000000+ 0000000+	.0000000- .2555811+ 163.7514+ .0000000+ 0000000+	.1000000+ .0755515- .0000006+ .1802013- 30.0	.002263 .6755171- 0000000+ .0000000+ 1.000	2053.8 .0001127+ .0022655+ .4771966+
2344.103+ .1636038- .0000000+ .0000000+ 0000000+	2.500000- .2550483+ 163.9061+ .0000000+ 0000000+	.1000000+ .0753621- .0000006+ .1636038- 30.0	.002259 .6490971- 0000000+ .0000000+ 1.000	2053.8 .0001128+ .0022612+ .5400982+
2345.103+ .060400- .0000000+ .0000000+ 0000000+	.0000000+ .246800+ 164.0606+ .0000000+ 0000000+	.1000000+ .047400- .0000006+ .0521635+ 30.0	.002254 .136500+ 0000000+ .0000000+ 1.000	2053.8 .0001129+ .0022570+ .9596199-
2346.103+ .2750442+ .0000000+ .0000000+ 0000000+	2.500000+ .2757307+ 164.2150+ .0000000+ 0000000+	.1000000+ .0009825- .0000006+ .2750442+ 30.0	.002249 .0975100+ 0000000+ .0000000+ 1.000	2053.8 .0001130+ .0022527+ .0108440-
2347.103+ .4386481+ .0000000+ .0000000+ 0000000+	.0000000+ .3315535+ 164.2150+ .0000000+ 0000000+	.1000000+ .0776830+ .0000006+ .4386481+ 30.0	.002249 1.323008+ 0000000+ .0000000+ 1.000	2053.8 .0001130+ .0022527+ .1770983+
2348.103+ .4499107+ .0000000+ .0000000+ 0000000+	.0000000+ .3290161+ 189.9949+ .0000000+ 0000000+	.1000000+ .0730740+ .0000005+ .4499107+ 40.0	.002240 1.367442+ 0000000+ .0000000+ 1.000	2053.8 .0001132+ .0022443+ .14.0813+
2349.103+ .2791936+ .0000000+ .0000000+ 0000000+	2.500000+ .2719246+ 190.3504+ .0000000+ 0000000+	.1000000+ .0117437- .0000005+ .2791936+ 40.0	.002233 1.026731+ 0000000+ .0000000+ 1.000	2053.8 .0001134+ .0022359+ .0528684-
2350.103+ .064000+ .0000000+ .0000000+ 0000000+	.0000000+ .247500+ 190.5279+ .0000000+ 0000000+	.1000000+ .060300- .0000005+ .0740189+ 40.0	.002229 .0619044+ 0000000+ .0000000+ 1.000	2053.8 .0001135+ .0022318+ 1.045085-

G.E.M.
FORCE

2351.103+	2.500000-	.1000 00+	.002226	2053.8
.1653821-	.2541628+	.0935014-	.6506937-	.0001137+
.0000000+	190.7052+	.0000005+	000000 0+	.0022276+
.000000 0+	.0000000+	.1653821-	.0000000+	.5653659+
0000000+	0000000+	40 0	1.000	
2352.103+	5.000000-	.1000000+	.002226	2053.8
.2009482-	.2719246+	.0957800-	.7389850-	.0001137+
.0000000+	190.7052+	.0000005+	0000000+	.0022276+
.0000000+	.0000000+	.2009482-	.0000000+	.4766405+
0000000+	0000000+	40.0	1.000	
2358.103+	5.000000-	.1000000+	.002292	2048.8
.8678119+	.2048235+	.0517210+	.239773+	291.0134+
1.215375+	94.00667+	3.095668+	.7140276+	.0022424+
26.31341+	17.17160+	.3917222+	.5486093+	.0595993+
.8227907+	.7140276+	10.0	1.047	
2359.103+	2.500000-	.1000000+	.002287	2048.8
1.045642+	.2486651+	.0593135+	4.205020+	294.4371+
1.236146+	94.09667+	3.129092+	.8458887+	.0022431+
26.44292+	17.46506+	.4676090+	.5528020+	.0567244+
.8089657+	.8458887+	10.0	1.048	
2360.103+	.0000000+	.1000000+	.002282	2048.8
1.251925+	.2943383+	.0594074+	4.253354+	294.7086+
1.230808+	94.18659+	3.128987+	1.017157+	.0022390+
26.35301+	17.38964+	.5611981+	.5517319+	.0474528+
.8124742+	1.017157+	10.0	1.048	
2361.103+	2.500000+	.1000000+	.002278	2048.8
1.145227+	.3400115+	.1033987+	3.368200+	296.9932+
1.240349+	94.27642+	3.150238+	.9233102+	.0022390+
26.35301+	17.52444+	.5111824+	.5536410+	.0902866+
.8062244+	.9233102+	10.0	1.049	
2362.103+	5.000000+	.1000000+	.002278	2048.8
1.024302+	.3636939+	.1446162+	2.816386+	294.9799+
1.225457+	94.27642+	3.128883+	.8358534+	.0022349+
26.26259+	17.31403+	.4602661+	.5506541+	.1411850+
.8160219+	.8358534+	10.0	1.048	
2363.103+	5.000000+	.1000000+	.002271	2048.8
1.033786+	.4048562+	.1674311+	2.553466+	294.9799+
.8083262+	115.5804+	2.552160+	1.278922+	.0022341+
25.99350+	17.13082+	.5716816+	.4470024+	.1619590+
1.237124+	1.278922+	15.0	1.048	

G.E.M.
FORCE

2364.103+	2.500000+	.1000000+	.002269	2048.8
1.185535+	.4071116+	.1443904+	2.912064+	295.2509+
.8047422+	115.6902+	2.552080+	1.473186+	.0022300+
25.90203+	17.05486+	.6569001+	.4459042+	.1217934+
1.242633+	1.473186+	15.0	1.048	
2365.103+	.0000000+	.1000000+	.002264	2048.8
1.119145+	.3653855+	.1044450+	3.062916+	295.2509+
.8090688+	115.7999+	2.549662+	1.383251+	.0022300+
26.04128+	17.14655+	.6186306+	.4472294+	.0933257+
1.235988+	1.383251+	15.0	1.048	
2366.103+	2.500000-	.1000000+	.002264	2048.8
.9436862+	.3214039+	.0852045+	2.936137+	295.5216+
.8184718+	115.7999+	2.552000+	1.152985+	.0022260+
26.36809+	17.34583+	.5189446+	.4500877+	.0902890+
1.221789+	1.152985+	15.0	1.048	
2367.103+	5.000000-	.1000000+	.002264	2048.8
.7634848+	.2808055+	.0764039+	2.718909+	295.5216+
.8228023+	115.7999+	2.552000+	.9279079+	.0022260+
26.50761+	17.43761+	.4188522+	.4513941+	.1000726+
1.215358+	.9279079+	15.0	1.048	
2368.103+	5.000000-	.1000000+	.002259	2048.8
.6970948+	.2664269+	.0374195+	2.616457+	295.7921+
.6176666+	133.8431+	2.209990+	1.128593+	.0022219+
26.55616+	17.45357+	.4309261+	.3818256+	.0536792+
1.618996+	1.128593+	20.0	1.048	
2369.103+	2.500000-	.1000000+	.002255	2048.8
.8962648+	.3129459+	.0509927+	2.863960+	295.7921+
.6111648+	133.9696+	2.207904+	1.466486+	.0022219+
26.27662+	17.26985+	.5562837+	.3793310+	.0568947+
1.636219+	1.466486+	20.0	1.048	
2370.103+	.0000000+	.1000000+	.002250	2048.8
1.056312+	.3586191+	.0789249+	2.945498+	296.0624+
.6052155+	134.0959+	2.207840+	1.745348+	.0022178+
26.04461+	17.10174+	.6580499+	.3770307+	.0747174+
1.652303+	1.745348+	20.0	1.048	
2371.103+	2.500000+	.1000000+	.002250	2048.8
1.187906+	.4119045+	.1147729+	2.383936+	296.0624+
.6019617+	134.0959+	2.207840+	1.973392+	.0022178+
25.90458+	17.00979+	.7415323+	.3757653+	.0966178+
1.661235+	1.973392+	20.0	1.048	

G.E.M.
FORCE

2372.103+	5.000000+	.1000000+	.002250	2048.8
1.155897+	.4482739+	.2097416+	2.578550+	296.0624+
.5954540+	134.0959+	2.207440+	1.94120 +	.002217+
25.62453+	16.82590+	.7244941+	.3732191+	.1814535+
1.679390+	1.94120 +	20.0	1.048	
2373.103+	5.000000+	.1000000+	.002228	2048.8
1.2211 1+	.4697006+	.136269 +	2.599742+	296.0624+
.3904616+	165.013 +	1.794173+	3.127327+	.002217+
25.20446+	16.55007+	.8761966+	.2808144+	.1115953+
2.561070+	3.127327+	30.0	1.048	
2374.103+	2.500000+	.1000000+	.002228	2048.8
1.090692+	.4166974+	.0867122+	2.617469+	296.0624+
.3926309+	165.0132+	1.794173+	2.777906+	.0022178+
25.34446+	16.64201+	.7831885+	.2819346+	.0795019+
2.546921+	2.777908+	30.0	1.048	
2375.103+	.0000000+	.1000000+	.002221	2048.8
.9413151+	.387687+	.0614132+	2.552589+	296.0624+
.3991385+	165.3200+	1.790835+	2.358366+	.0022178+
25.76455+	16.91785+	.6727619+	.2852745+	.0652419+
2.505395+	2.358366+	30.0	1.048	
2376.103+	2.500000+	.1000000+	.002221	2048.8
.7682269+	.3332451+	.0436463+	2.305290+	296.0624+
.4078155+	165.3208+	1.790835+	1.883761+	.0022178+
26.32465+	17.28563+	.5456672+	.2896796+	.0568144+
2.457089+	1.883761+	30.0	1.048	
2377.103+	5.000000-	.1000000+	.002221	2048.8
.5903966+	.2932106+	.0337089+	2.013558+	296.0624+
.4143232+	165.3208+	1.790835+	1.424966+	.0022178+
26.74473+	17.56146+	.4174411+	.2929480+	.0570954+
2.413574+	1.424966+	30.0	1.048	
2378.103+	5.000000-	.1000000+	.002208	2048.8
.5370475+	.2901093+	.0145887+	1.851189+	295.7921+
.3120841+	191.4375+	1.545110+	1.720841+	.0022219+
26.83569+	17.63729+	.4093087+	.2378537+	.271646+
3.204263+	1.720841+	40.0	1.048	
2379.103+	2.500000-	.1000000+	.002205	2048.8
.6935332+	.3256329+	.0328584+	2.129715+	296.3574+
.3090711+	191.6143+	1.557072+	2.238142+	.0022178+
26.46460+	17.51225+	.5294701+	.2365667+	.473700+
3.227136+	2.238142+	40.0	1.049	

G.E.M.
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2300.103+	.0000000+	.1000000+	.002201	2048.8
.0553638+	.311794+	.0190791+	2.305631+	296.3574+
.3033110+	191.7910+	1.555638+	2.800059+	.0022178+
25.90458+	17.14115+	.6562990+	.2327252+	.0575535+
3.296912+	2.820059+	40.0	1.049	

2301.103+	2.500000+	.1000000+	.002198	2048.8
1.010076+	.4013320+	.0141792+	2.514209+	296.3324+
.2947417+	191.9675+	1.543658+	3.426987+	.0022138+
25.39073+	16.65719+	.7801372+	.2276451+	.0635397+
3.397800+	3.426987+	40.0	1.048	

2302.103+	5.000000+	.1000000+	.002198	2048.8
1.140753+	.461307+	.1106928+	2.487585+	296.6295+
.2904624+	191.9675+	1.555625+	3.955017+	.0022138+
24.82961+	16.41555+	.8902110+	.2250839+	.0980104+
3.442786+	3.955017+	40.0	1.049	

2303.103+	2.500000+	.0500000+	.002256	2046.7
.4908116+	.3075711+	.0161442+	1.594211+	.0001127+
.0000000+	94.69046+	.0000011+	0000000+	.0022577+
.0000000+	.0000000+	.4908116+	.0000000+	.0337078+
0000000+	0000000+	10.0	1.000	

2304.103+	.0000000+	.0500000+	.002252	2046.7
.0653585+	.2638895+	.0467266-	.3234631+	.0001128+
.0000000+	94.77992+	.0000011+	0000000+	.0022534+
.0000000+	.0000000+	.0853585+	.0000000+	.5474166-
0000000+	0000000+	10.0	1.000	

2305.103+	2.500000-	.0500000+	.002252	2046.7
.0284528-	.2588147+	.0728024-	.1099351-	.0001128+
.0000000+	94.77992+	.0000011+	0000000+	.0022534+
.0000000+	.0000000+	.0284528-	.0000000+	2.558706+
0000000+	0000000+	10.0	1.000	

2306.103+	2.500000-	.0500000+	.002246	2046.7
.0047421+	.2588147+	.071945-	.0181250+	.0001129+
.0000000+	11.11267+	.0000009+	0000000+	.0022492+
.0000000+	.0000000+	.0047421+	.0000000+	16.48929-
0000000+	0000000+	15.0	1.000	

2307.103+	.0000000+	.0500000+	.002246	2046.7
.1131114+	.2762916+	.0136524-	.4119704+	.0001129+
.0000000+	11.11267+	.0000009+	0000000+	.0022492+
.0000000+	.0000000+	.1131114+	.0000000+	.1200184-
.0000000+	0000000+	15.0	1.000	

G.E.M.
FORCE

2388.103+ .5074091+ .0000000+ .0000000+ 0000000+	2.500000+ .3067434+ 116.3060+ .0000000+ 0000000+	.0500000+ .0042509- .0000009+ .5074091+ 15.0	.002242 1.654101+ 0000000+ .0000000+ 1.000	2046.7 .0001130+ .0022450+ .0083777-
2389.103+ .5085947+ .0000000+ .0000000+ 0000000+	2.500000+ .3104085+ 134.5578+ .0000000+ 0000000+	.0500000+ .0312306+ .0000008+ .5085947+ 20.0	.002232 1.633400+ 0000000+ .0000000+ 1.000	2046.7 .0001132+ .0022366+ .0614175+
2390.103+ .1315944+ .0000000+ .0000000+ 0000000+	.0000000+ .2503567+ 134.5578+ .0000000+ 0000000+	.0500000+ .0465015- .0000008+ .1315944+ 20.0	.002232 .5256276+ 0000000+ .0000000+ 1.000	2046.7 .0001132+ .0022366+ .3533700-
2391.103+ .0177830+ .0000000+ .0000000+ 0000000+	2.500000- .2495109+ 134.6837+ .0000000+ 0000000+	.0500000+ .0594461- .0000008+ .0177830+ 20.0	.002228 .0712715+ 0000000+ .0000000+ 1.000	2046.7 .0001133+ .0022324+ 3.342860-
2392.103+ .0142264+ .0000000+ .0000000+ 0000000+	2.500000- .2565593+ 165.4237+ .0000000+ 0000000+	.0500000+ .0894419- .0000006+ .0142264+ 30.0	.002219 .0554508+ 0000000+ .0000000+ 1.000	2046.7 .0001137+ .0022199+ 6.287026-
2393.103+ .1564906+ .0000000+ .0000000+ 0000000+	.0000000+ .2526122+ 165.5773+ .0000000+ 0000000+	.0500000+ .0880695- .0000006+ .1564906+ 30.0	.002214 .6194896+ 0000000+ .0000000+ 1.000	2046.7 .0001138+ .0022158+ .5627781-
2394.103+ .5429752+ .0000000+ .0000000+ 0000000+	2.500000+ .3067434+ 165.5773+ .0000000+ 0000000+	.0500000+ .0139844- .0000006+ .5429752+ 30.0	.002214 1.770126+ 0000000+ .0000000+ 1.000	2046.7 .0001138+ .0022158+ .0257552-
2395.103+ .5477173+ .0000000+ .0000000+ 0000000+	2.500000+ .3049108+ 191.9203+ .0000000+ 0000000+	.0500000+ .0137694- .0000005+ .5477173+ 40.0	.002198 1.796319+ 0000000+ .0000000+ 1.000	2046.7 .0001142+ .0021995+ .0251397-

G.E.M.
FORCE

2336.103+	.0000000+	.0500000+	.002196	2046.7
.1529340+	.2507796+	.0867030-	.6028343+	.0001143+
.0000000+	192.0959+	.0000005+	0000000+	.0021955+
.0000000+	.0000000+	.1529340+	.0000000+	.5656559-
0000000+	0000000+	40.0	1.000	

2397.103+	2.500000-	.0500000+	.002189	2046.7
.0177830+	.2579689+	.0951016-	.0687347+	.0001144+
.0000000+	192.2734+	.0000005+	0000000+	.0021914+
.0000000+	.0000000+	.0177830+	.0000000+	5.37003-
0000000+	0000000+	40.0	1.000	

2401.103+	2.500000-	.0500000+	.002243	2046.7
2.027265+	.1133371+	.0204918+	17.88702+	294.4371+
1.188900+	94.95366+	3.100851+	1.705159+	.0022416+
25.44956+	16.79754+	.9261568+	.5431497+	.0101081+
.8411129+	1.705159+	10.0	1.048	

2402.103+	.0000000+	.0500000+	.002240	2046.7
2.262001+	.2199079+	.0917983+	1.28612+	297.5396+
1.189656+	95.04286+	3.130584+	1.901391+	.0022293+
25.33967+	16.80822+	1.033039+	.5433073+	.0405827+
.8405789+	1.901391+	10.0	1.049	

2403.103+	2.500000+	.0500000+	.002240	2046.7
2.126850+	.3095627+	.1405580+	5.870498+	297.5396+
1.189656+	95.04286+	3.130584+	1.787785+	.0022293+
25.33967+	16.80822+	.9713171+	.5433073+	.0660874+
.8405789+	1.787785+	10.0	1.049	

2404.103+	2.500000+	.0500000+	.002233	2046.7
1.583875+	.2909551+	.1308302+	5.443709+	297.8125+
.7973227+	116.5144+	2.556014+	1.986492+	.0022252+
25.49781+	16.89762+	.8812415+	.4436168+	.0826013+
1.254197+	1.98649+	15.0	1.049	

2405.103+	.0000000+	.0500000+	.002229	2046.7
1.655007+	.2356962+	.1033101+	7.021781+	295.5216+
.7868589+	116.6234+	2.533981+	2.103309+	.0022244+
25.36687+	16.67586+	.9262105+	.4403587+	.0624227+
1.270875+	2.103309+	15.0	1.048	

2406.103+	2.500000-	.0500000+	.002229	2046.7
1.465321+	.1883314+	.0646.96+	7.780547+	295.5216+
.7924886+	116.6234+	2.533981+	1.849.13+	.0022244+
25.54836+	16.79517+	.8174790+	.4421164+	.0440924+
1.261847+	1.849013+	15.0	1.048	

G.E.M.
FORCE

2407.103+	2.500000+	.0500000+	.002301	2047.4
1.340840+	.2833429+	.0615252+	4.732217+	293.9696+
.6041683+	132.517+	2.216666+	2.219316+	.0228145+
25.42017+	17.07214+	.8358478+	.3766240+	.0458855+
1.655167+	2.219316+	20.0	1.049	

2408.103+	.0000000+	.0500000+	.002296	2047.4
1.411972+	.2621979+	.0647373+	5.385130+	294.2457+
.5982581+	132.7455+	2.216614+	2.360100+	.0022803+
25.19551+	16.9054+	.8834392+	.3743227+	.0458481+
1.671491+	2.360100+	20.0	1.049	

2409.103+	2.500000-	.0500000+	.002296	2047.4
1.255482+	.2266743+	.0420864+	5.538702+	292.5296+
.5979938+	132.7455+	2.203686+	2.099489+	.0022717+
25.42677+	16.89777+	.7856613+	.3742153+	.0335221+
1.672257+	2.099489+	20.0	1.048	

2410.103+	2.500000-	.0500000+	.002279	2047.4
1.109661+	.2514845+	.0295223+	4.412443+	295.0727+
.3976043+	163.2120+	1.807910+	2.769414+	.0022677+
25.20037+	16.86129+	.7938601+	.2845921+	.0266048+
2.513798+	2.789484+	30.0	1.049	

2411.103+	.0000000+	.0500000+	.002275	2047.4
1.275636+	.2740391+	.0492649+	4.651940+	295.0727+
.3913183+	163.3676+	1.806187+	3.259812+	.0022675+
24.78945+	16.58638+	.9168547+	.2812572+	.0336196+
2.555463+	3.259842+	30.0	1.049	

2412.103+	2.500000+	.0500000+	.002268	2047.4
1.268502+	.3022325+	.111387+	4.197175+	295.0727+
.3848324+	163.5233+	1.804459+	3.296299+	.0022677+
24.37866+	16.31147+	.9160118+	.2778909+	.882027+
2.598533+	3.296299+	30.0	1.049	

2313.103+	2.500000+	.0500000+	.002256	2047.4
1.275043+	.3368833+	.083702+	3.787607+	295.0727+
.2805162+	189.3677+	1.558197+	4.545337+	.0022677+
23.69332+	15.85378+	.9957255+	.2190653+	.0336196+
3.564847+	4.545333+	40.0	1.049	

2414.103+	.0000000+	.0500000+	.002247	2047.4
1.163010+	.3047109+	.0548815+	3.817773+	295.0727+
.2847971+	189.7554+	1.543797+	4.003073+	.0022677+
24.24166+	16.07007+	.9052100+	.2210057+	.0336196+
3.511296+	4.003673+	40.0	1.048	

G.B.M.
FORCE

2415.103+	2.500000-	.0500000+	.002243	2047.4
.9922931+	.2791139+	.0392423+	3.555154+	298.4773+
.3050761+	189.9040+	1.571727+	3.252608+	.0022675+
25.47429+	17.24124+	.7603335+	.2337611+	.0395471+
3.277870+	3.252608+	40.0	1.050	
2416.103+	2.500000+	.0300000+	.002290	2047.4
.6686420+	.3112543+	.0557647+	2.148217+	.0001119+
.0000000+	94.04563+	.0000011+	0000000+	.0022688+
.0000000+	.0000000+	.6686420+	.0000000+	.0833999+
0000000+	0000000+	10.0	1.000	
2417.103+	.0000000+	.0300000+	.002290	2047.4
.2205095+	.2418987+	.0517554-	.9115779+	.0001119+
.0000000+	94.04563+	.0000011+	0000000+	.0022688+
.0000000+	.0000000+	.2205095+	.0000000+	.2152082-
0000000+	0000000+	10.0	1.000	
2418.103+	2.500000-	.0300000+	.002285	2047.4
.2631888+	.2568147+	.0250000-	1.015900+	.0001121+
.0000000+	94.13567+	.0000011+	0000000+	.0022644+
.0000000+	.0000000+	.2631888+	.0000000+	.0950193-
0000000+	0000000+	10.0	1.000	
2419.103+	2.500000-	.0300000+	.002284	2047.4
.2513335+	.2796778+	.0045683+	.5986536+	.0001121+
.0000000+	115.2981+	.0000009+	0000000+	.0022844+
.0000000+	.0000000+	.2513335+	.0000000+	.0181764+
0000000+	0000000+	15.0	1.000	
2420.103+	.0000000+	.0300000+	.002279	2047.4
.2228806+	.2684005+	.0162366-	.2304032+	.0001122+
.0000000+	115.4083+	.0000009+	0000000+	.0022800+
.0000000+	.0000000+	.2228806+	.0000000+	.0723500-
0000000+	0000000+	15.0	1.000	
2421.103+	2.500000+	.0300000+	.002279	2047.4
.7018369+	.3123821+	.0509604+	2.246725+	.0001122+
.0000000+	115.4083+	.0000009+	0000000+	.0022800+
.0000000+	.0000000+	.7018369+	.0000000+	.0726100+
0000000+	0000000+	15.0	1.000	
2422.103+	2.500000+	.0300000+	.002275	2047.4
.7042080+	.3154833+	.0490719+	2.232155+	.0001123+
.0000000+	133.3960+	.0000000+	0.000000+	.0022757+
.0000000+	.0000000+	.7042080+	.0000000+	.0705358+
0000000+	0000000+	20.0	1.000	

G.E.M.
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2423.103+	.0000000+	.0300000+	.002275	2047.4
.2240662+	.2435903+	.0300000-	.9100000+	.0001123+
.0000000+	133.3950+	.0000000+	0000000+	.0022757+
.0000000+	.0000000+	.2240662+	.0000000+	.1703001-
0000000+	0000000+	20.0	1.000	
2424.103+	2.500000-	.0300000+	.002268	2047.4
.2276228+	.2523911+	.0307372-	.9000713+	.0001124+
.0000000+	133.5430+	.0000000+	0000000+	.0022714+
.0000000+	.0000000+	.2276228+	.0000000+	.1050300-
0000000+	0000000+	20.0	1.000	
2425.103+	2.500000-	.0300000+	.002261	2047.4
.2323649+	.2616341+	.0283504-	.8881204+	.0001126+
.0000000+	163.8507+	.0000000+	0000000+	.0022628+
.0000000+	.0000000+	.2323649+	.0000000+	.1270340-
0000000+	0000000+	30.0	1.000	
2426.103+	.0000000+	.0300000+	.002252	2047.4
.2537045+	.2469735+	.0458443-	1.027153+	.0001128+
.0000000+	164.1608+	.0000000+	0000000+	.0022542+
.0000000+	.0000000+	.2537045+	.0000000+	.1800906-
0000000+	0000000+	30.0	1.000	
2427.103+	2.500000+	.0300000+	.002252	2047.4
.7113212+	.3135098+	.0411513+	2.268006+	.0001128+
.0000000+	164.1608+	.0000000+	0000000+	.0022542+
.0000000+	.0000000+	.7113212+	.0000000+	.0582737+
0000000+	0000000+	30.0	1.000	
2428.103+	2.500000+	.0300000+	.002232	2047.4
.7184344+	.3087169+	.0301400+	2.307100+	.0001130+
.0000000+	190.2902+	.0000000+	0000000+	.0022373+
.0000000+	.0000000+	.7184344+	.0000000+	.0447309+
0000000+	0000000+	40.0	1.000	
2429.103+	.0000000+	.0300000+	.002225	2047.4
.2436275+	.2469735+	.0400000-	.9064510+	.0001134+
.0000000+	190.0400+	.0000000+	0000000+	.0022290+
.0000000+	.0000000+	.2436275+	.0000000+	.0007261-
0000000+	0000000+	40.0	1.000	
2430.103+	2.500000-	.0300000+	.002221	2047.4
.2276228+	.2651582+	.0331704-	.8500000+	.0001135+
.0000000+	190.8240+	.0000000+	0000000+	.0022246+
.0000000+	.0000000+	.2276228+	.0000000+	.1457430-
0000000+	0000000+	40.0	1.000	

G.E.M.
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2434.103+	2.500000-	.300000+	.002296	2052.4
3.606398+	.0355235+	.1206591-	101.5212+	293.9696+
1.085564+	93.92727+	3.129757+	3.322141+	.0022884+
22.79861+	15.33754+	1.729219+	.5205135+	.0334569-
.9211797+	3.322141+	10.0	1.048	

2435.103+	.0000000+	.0300000+	.002296	2052.4
3.834021+	.1928423+	.0189020-	19.88163+	293.9696+
1.072641+	93.92727+	3.129757+	3.574375+	.0022876+
22.53484+	15.15495+	1.849824+	.5175237+	.0049300-
.932782+	3.574375+	10.0	1.049	

2436.103+	2.500000+	.0300000+	.002291	2052.4
3.713097+	.3501611+	.0999844+	10.60396+	293.9696+
1.072641+	94.01720+	3.126764+	3.461639+	.0022876+
22.53484+	15.15495+	1.791480+	.5175237+	.0269274+
.9322782+	3.461639+	10.0	1.049	

2437.103+	2.500000+	.0300000+	.002286	2052.4
2.593951+	.3089989+	.0809591+	8.394695+	293.9696+
.7194018+	115.2591+	2.550511+	3.605706+	.0022876+
22.67059+	15.24625+	1.508636+	.4184023+	.0312107+
1.390043+	3.605706+	15.0	1.049	

2438.103+	.0000000+	.0300000+	.002286	2052.4
2.703020+	.2153970+	.0195865+	12.54901+	294.2457+
.7187841+	115.2591+	2.552907+	3.760546+	.0022888+
22.61872+	15.23315+	1.572635+	.4181933+	.0072461+
1.391238+	3.760546+	15.0	1.049	

2439.103+	2.500000-	.0300000+	.002282	2052.4
2.541788+	.125000+	.045000-	45.07782-	294.2457+
.7287701+	115.3690+	2.550474+	3.490171+	.0022888+
22.91722+	15.43419+	1.470712+	.4213867+	.0540424-
1.373116+	3.490171+	15.0	1.049	

2440.103+	2.500000-	.0300000+	.002275	2052.4
2.005926+	.152200+	.063600-	169.4022+	294.2457+
.5520236+	133.3480+	2.206599+	3.633768+	.0022888+
23.16146+	15.59868+	1.292458+	.3556799+	.0673356-
1.811516+	3.633768+	20.0	1.049	

2441.103+	.0000000+	.0300000+	.002272	2052.4
2.20500+	.222000+	.003200-	24.34907+	294.2457+
.5442622+	133.4747+	2.204504+	3.973115+	.0022888+
22.83581+	15.37936+	1.400291+	.3524416+	.0299521-
1.837349+	3.973115+	20.0	1.049	

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FORCE

2.500000+	.0300000+	.002272	2052.4
.286000+	.059300+	13.70697+	294.2457+
133.4747+	2.204504+	3.873904+	.002288+
15.30626+	1.361115+	.3513549+	.0040070-
3.873904+	20.0	1.049	

2.500000+	.0300000+	.002258	2052.4
.263000+	.053400+	9.279079+	294.2457+
163.9456+	1.794776+	4.285251+	.002288+
15.52557+	1.148839+	.2680914+	.0022871+
4.285251+	30.0	1.049	

2444.103+	.0000000+	.0300000+	.002248	2052.4
1.626554+	.238000+	.007988+	11.22429+	294.2457+
.3662910+	164.2547+	1.791399+	4.440607+	.0022880+
23.06071+	15.52557+	1.190489+	.2680914+	.0238508-
2.730069+	4.440607+	30.0	1.049	

2445.103+	2.500000-	.0300000+	.002248	2052.4
1.496145+	.201500+	.023200-	14.42047+	294.5216+
.3722451+	164.2547+	1.793079+	4.019248+	.0022837+
23.45754+	15.77794+	1.090290+	.271267+	.481406-
2.68642+	4.19248+	30.0	1.049	

2446.103+	2.500000-	.0300000+	.002232	2052.4
1.239477+	.229800+	.014900-	7.878762+	294.5216+
.2790219+	190.3865+	1.546967+	4.442221+	.0022822+
23.45982+	15.76880+	.9690821+	.2181526+	.0410154-
3.583947+	4.442221+	40.0	1.049	

2447.103+	.0000000+	.0300000+	.002225	2052.4
1.349732+	.250500+	.009200+	7.474498+	294.5216+
.2728718+	190.7414+	1.544088+	4.946395+	.0022822+
22.94272+	15.42122+	1.060383+	.2143749+	.0187365-
3.664723+	4.946395+	40.0	1.049	

2448.103+	2.500000+	.0300000+	.002221	2052.4
1.287491+	.261200+	.051200+	6.735475+	292.2561+
.2707728+	190.9185+	1.530789+	4.754877+	.0022829+
22.93496+	15.30260+	1.13156+	.2130772+	.0119976+
3.693132+	4.754877+	40.0	1.048	

2449.103+	.0000000+	.0100000+	.002295	2051.6
.4125663+	.2537399+	.0036789-	1.625941+	.001119+
.0000000+	93.94832+	.0000011+	.0000000+	.0022935+
.0000000+	.0000000+	.4125663+	.0000000+	.0089171-
.0000000+	.0000000+	10.0	1.000	

G.E.M.
FORCE

2450.103+	.0000000+	.0100000+	.002284	2051.6
.4125663+	.2616341+	.0083687-	1.576882+	.0001122+
.0000000+	115.2889+	.0000009+	0000000+	.0022848+
.0000000+	.0000000+	.4125663+	.0000000+	.0202846-
0000000+	0000000+	15.0	1.000	
2451.103+	.0000000+	.0100000+	.002273	2051.6
.4125663+	.2469735+	.0181184-	1.670487+	.0001124+
.0000000+	133.3848+	.0000008+	0000000+	.0022761+
.0000000+	.0000000+	.4125663+	.0000000+	.0439164-
0000000+	0000000+	20.0	1.000	
2452.103+	.0000000+	.0100000+	.002257	2051.6
.4149374+	.2543038+	.015036 -	1.631650+	.0001128+
.0000000+	163.9908+	.0000006+	0000000+	.0022589+
.0000000+	.0000000+	.4149374+	.0000000+	.0362372-
0000000+	0000000+	30.0	1.000	
2453.103+	.0000000+	.0100000+	.002245	2051.6
.4179012+	.2507796+	.027033 -	1.666407+	.0001131+
.0000000+	189.9151+	.0000005+	0000000+	.0022462+
.0000000+	.0000000+	.4179012+	.0000000+	.0646882-
0000000+	0000000+	40.0	1.000	
2455.103+	.0000000+	.0100000+	.002285	2051.6
6.95672+	.2215995+	.2576853+	31.39320+	292.3072+
.6746409+	94.12650+	3.105471+	10.31174+	.0023334+
13.97474+	9.531756+	4.154157+	.4028570+	.0370412+
1.482269+	10.31174+	10.0	1.000	
2456.103+	.0000000+	.0100000+	.002271	2051.6
4.870179+	.2165247+	.1549608+	22.49348+	292.5849+
.4570479+	115.8124+	2.530738+	10.65573+	.0023389+
14.21466+	9.686196+	3.342497+	.3136607+	.0310183+
2.187954+	10.65573+	15.0	1.000	
2457.103+	.0000000+	.0100000+	.002261	2051.6
3.755776+	.2258285+	.1196811+	16.63109+	292.5849+
.3427859+	133.7577+	2.187423+	10.95612+	.0023389+
14.21466+	9.686196+	2.797002+	.2552796+	.0318658+
2.917272+	10.95666+	20.0	1.049	
2458.103+	.0000000+	.0100000+	.002245	2051.6
2.717247+	.2373877+	.0866030+	11.44644+	292.5849+
.2317396+	164.4455+	1.779117+	11.72543+	.0023381+
14.41952+	9.82494+	2.206024+	.1811400+	.0318716+
4.315188+	11.72543+	30.0	1.049	

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2459.103+	.0000000+	.0100000+	.002234	2051.6
2.144633+	.235949+	.0562167+	9.220464+	292.5849+
.1738047+	190.2514+	1.537885+	12.33933+	.0023274+
14.42436+	9.822494+	1.827076+	.1480695+	.0262127+
5.753524+	12.33933+	40.0	1.049	

2460.103+	.0000000+	.0100000+	.002247	2051.6
1.632482+	.2562773+	.1315000+	6.369982+	136.1874+
.0981123+	109.5201+	1.243497+	16.63891+	.002245 +
6.044611+	1.848257+	1.486626+	.0893463+	.0205522+
10.19240+	16.63891+	13.65	1.010	

2461.103+	.0000000+	.0100000+	.002247	2051.6
1.296637+	.2387572+	.0857990+	5.430776+	136.3143+
.0746507+	125.4733+	1.086402+	17.36938+	.0022402+
6.044103+	1.845747+	1.206566+	.0694651+	.0261704+
13.39571+	17.36938+	17.95	1.010	

2462.103+	.0000000+	.0100000+	.002245	2051.6
1.208409+	.2419982+	.0691833+	4.993462+	136.4412+
.0615342+	138.3994+	.9858512+	19.63798+	.0022360+
6.055358+	1.847465+	1.138361+	.0579673+	.0572515+
16.25110+	19.63798+	21.78	1.010	

2463.103+	.0000000+	.0300000+	.002258	2051.6
1.232364+	.2753078+	.898434+	4.476312+	135.6782+
.1520983+	109.3102+	1.241221+	8.102417+	.0022587+
9.351644+	2.865155+	1.069669+	.1320185+	.0729033+
6.574694+	8.102417+	13.65	1.010	

2464.103+	.0000000+	.0300000+	.002252	2051.6
1.117790+	.2977215+	.0661988+	3.754452+	135.9330+
.1113213+	125.3552+	1.084382+	10.04111+	.0022497+
9.000285+	2.752433+	1.005821+	.1001702+	.0592229+
8.983000+	10.04111+	17.95	1.010	

2465.103+	.0000000+	.0300000+	.002247	2051.6
1.067818+	.3017018+	.712479+	3.539318+	135.9330+
.0874581+	138.2695+	.9831022+	12.20947+	.0022497+
8.586162+	2.625788+	.9819400+	.0804244+	.0667228+
11.43403+	12.0947+	21.78	1.010	

2466.103+	.0000000+	.0500000+	.002262	2051.6
1.11400+	.332200+	.0327270+	3.378298+	135.2952+
.174044+	109.2071+	1.238886+	6.418004+	.0022702+
1.45118+	3.210109+	.9344261+	.1455944+	.0274373+
5.808392+	6.418004+	13.65	1.010	

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2467.103+ 1973000+ .1144076+ 9.703441+ 8.740572+	.0000000+ 843000+ 125.3530+ 2.82874+ 3.313586+	.0500000+ .050600+ 1.026315+ .8534921+ 17.95	.002253 2.811356+ 3.313586+ .1026623+ 1.009	2051.6 128.6518+ .0022659+ .0576320+
2468.103+ .913838+ .1030128+ 10.10121+ 9.707527+	.00 0000+ .33 7476+ 138.2671+ 3.092790+ 3.871113+	.0500000+ .0315555+ .9812764+ .8284931+ 21.78	.002248 2.746341+ 3.871113+ .0333922+ 1.010	2051.6 135.6782+ .022566+ .0345302+
2469.103+ .385594+ .1917315+ 11.79360+ 5.215617+	.0000000+ .3336680+ 109.310+ 3.611879+ 4.618925+	.1000000+ .000209 + 1.240054+ .7431159+ 13.65	.002257 2.654119+ 4.618925+ .1608550+ 1.010	2051.6 135.5507+ .0022593+ .0002362+
2470.103+ .7641522+ .1421288+ 11.48925+ 7.035869+	.0000000+ .3209706+ 125.2349+ 3.51415+ 5.375545+	.1000000+ .0057400+ 1.083389+ .6690683+ 17.95	.002257 2.381156+ 5.375545+ .1244420+ 1.010	2051.6 135.6782+ .0022543+ .0075115+
2471.103+ .7163423+ .1202752+ 11.80510+ 8.314265+	.0000000+ .3168767+ 138.3970+ 3.611065+ 5.955860+	.1000000+ .0143991+ .9303554+ .6394342+ 21.78	.002245 2.260991+ 5.955860+ .1073621+ 1.010	2051.6 135.6782+ .0022543+ .0201009-
2472.103+ .7415524+ .1967234+ 12.03190+ 5.083273+	.0000000+ .3285932+ 109.3102+ 3.705911+ 3.769517+	.1500000+ .0153313+ 1.237716+ .6196523+ 13.65	.002258 2.256745+ 3.769517+ .1643850+ 1.010	2051.6 135.2952+ .0022671+ .0206747+
2473.103+ .6340921+ .1498560+ 12.09110+ 6.673071+	.0000 00+ .316075+ 125.3530+ 3.705207+ 4.231342+	.1500000+ .0010357+ 1.080332+ .5514534+ 17.95	.002252 2.006065+ 4.231342+ .1303259+ 1.010	2051.6 135.4230+ .0022628+ .0016334-
2474.103+ .5891413+ .1266118+ 12.41641+ 7.898152+	.0000000+ .3048859+ 138.3970+ 3.801313+ 4.65312+	.1500000+ .0161130+ .9794336+ .5229319+ 21.78	.002245 1.932333+ 4.65312+ .1123828+ 1.010	2051.6 135.5507+ .0022585+ .0273514-

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT

AND A JET CONVERGENCE ANGLE OF 0°

Key for Reading Following Data:

RUN NO.	α	h/D	ρ	BP
C_L	C_D	C_M	L/D	V_j
C_{μ}	V_o	V_j/V_o	A	ρ_l
Q	$\dot{m} V_j$	C_L'	C_{μ}'	C_M/C_L
$1/C_{\mu}$	A	q	P_M/P_o	

February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

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FORCE

2475.100+	2.500000+	.2500000+	.002318	2038.2
.2205095+	.2554315+	.0010557-	.8632824+	.0000110+
.0000000+	93.35031+	.0000001+	0000000+	.0023230+
.0000000+	.0000000+	.2205095+	.0000000+	.0047876-
0000000+	0000000+	10.0	1.000	

2476.100+	.0000000+	.2500000+	.002309	2038.2
.1066981+	.2334407+	.0358541-	.4570674+	.0001111+
.0000000+	93.53.46+	.0000011+	0000000+	.0023140+
.0000000+	.0000000+	.1066981+	.0000000+	.3360330-
0000000+	0000000+	10.0	1.000	

2477.100+	2.500000-	.2500000+	.002305	2038.2
.0426792-	.2165.47+	.0772830-	.1971103-	.0001112+
.0000000+	93.62340+	.0000011+	0000000+	.0023095+
.0000000+	.0000000+	.0426792-	.0000000+	1.810785+
0000000+	0000000+	10.0	1.000	

2478.100+	2.500000-	.2500000+	.002304	2038.2
.0331949-	.2210357+	.0908878-	.1501793-	.0001112+
.0000000+	114.8707+	.0000009+	0000000+	.0023095+
.0000000+	.0000000+	.0331949-	.0000000+	2.737998+
0000000+	0000000+	15.0	1.000	

2479.100+	.0000000+	.2500000+	.002299	2038.2
.0995849+	.2402071+	.0645838-	.4145795+	.0001113+
.0000000+	114.7820+	.0000009+	0000000+	.0023050+
.0000000+	.0000000+	.0995849+	.0000000+	.6485298-
0000000+	0000000+	15.0	1.000	

2480.100+	2.500000+	.2500000+	.002297	2038.2
.2039120+	.2661450+	.0264199-	.7661690+	.0001114+
.0000000+	114.8931+	.0000009+	0000000+	.0023005+
.0000000+	.0000000+	.2039120+	.0000000+	.1295653-
0000000+	0000000+	15.0	1.000	

2481.100+	2.500000+	.2500000+	.002292	2038.2
.2027265+	.2435903+	.0424464-	.8322437+	.0001115+
.0000000+	132.8023+	.0000008+	0000000+	.0022961+
.0000000+	.0000000+	.2027265+	.0000000+	.2093780-
0000000+	0000000+	20.0	1.000	

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2483.100+	.0000000+	.2500000+	.002285	2038.2
.1230378+	.2199079+	.0732013-	.5822336+	.0001117+
.0000000+	133.0585+	.0000008+	0000000+	.0022873+
.0000000+	.0000000+	.1280378+	.0000000+	.5717167-
0000000+	0000000+	20.0	1.000	

2483.100+	2.500000-	.2500000+	.002285	2038.2
.0426792-	.2038377+	.0991556-	.2093786-	.0001117+
.0000000+	133.0585+	.0000008+	0000000+	.0022873+
.0000000+	.0000000+	.0426792-	.0000000+	2.32373+
0000000+	0000000+	20.0	1.000	

2484.100+	2.500000-	.2500000+	.002274	2038.2
.0379371-	.2097583+	.1172086-	.1808611-	.0001121+
.0000000+	163.4406+	.0000006+	0000000+	.0022741+
.0000000+	.0000000+	.0379371-	.0000000+	3.089550+
0000000+	0000000+	30.0	1.000	

2485.100+	.0000000+	.2500000+	.002265	2038.2
.1066981+	.2221634+	.0854710-	.4802688+	.0001123+
.0000000+	163.7528+	.0000006+	0000000+	.0022655+
.0000000+	.0000000+	.1066981+	.0000000+	.8010544-
0000000+	0000000+	30.0	1.000	

2486.100+	2.500000+	.2500000+	.002258	2038.2
.2062831+	.2447181+	.0578769-	.8429419+	.0001124+
.0000000+	163.9087+	.0000006+	0000000+	.0022612+
.0000000+	.0000000+	.2062831+	.0000000+	.2805705-
0000000+	0000000+	30.0	1.000	

2487.100+	2.500000+	.2500000+	.002246	2038.2
.2062831+	.2457048+	.0741588-	.8395566+	.0001127+
.0000000+	189.8242+	.0000005+	0000000+	.0022483+
.0000000+	.0000000+	.2062831+	.0000000+	.3595004-
0000000+	0000000+	40.0	1.000	

2488.100+	.0000000+	.2500000+	.002236	2038.2
.0978066+	.2287888+	.1018872-	.4274975+	.0001129+
.0000000+	190.1827+	.0000005+	0000000+	.0022399+
.0000000+	.0000000+	.0978066+	.0000000+	1.041721-
0000000+	0000000+	40.0	1.000	

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2489.100+	2.500000-	.2500000+	.002232	2038.2
.0409009-	.2211766+	.1274221-	.1849244-	.0000113+
.0000000+	190.3617+	.0000000+	0000000+	.0022357+
.0000000+	.0000000+	.0409009-	.0000000+	3.115383+
0000000+	0000000+	40.0	1.000	

2493.100+	2.500000-	.2500000+	.002286	2038.2
.3770002+	.4059839+	.0568168+	.9286087+	295.3478+
1.33477+	94.07025+	3.139651+	.3056401+	.0022517+
26.20414+	17.42735+	.1687951+	.5522677+	.1507077+
.8107159+	.3056401+	10.0	1.049	

2494.100+	.0000000+	.2500000+	.002282	2038.2
.4339059+	.4059839+	.0400751+	1.068776+	295.6227+
1.234625+	94.16066+	3.139556+	.3514474+	.0022483+
26.24398+	17.44357+	.1941739+	.554977+	.0923590+
.8099621+	.3514474+	10.0	1.049	

2495.100+	2.500000+	.2500000+	.002282	2038.2
.6401891+	.4178251+	.0665257+	1.532193+	295.6227+
1.228127+	94.16066+	3.139556+	.5212725+	.0022483+
26.10585+	17.35176+	.2873215+	.5511926+	.1039157+
.8142476+	.5212725+	10.0	1.049	

2496.100+	2.500000+	.2500000+	.002280	2038.2
.5975098+	.4116226+	.0861041+	1.451596+	295.8973+
.8195122+	115.4354+	2.563314+	.7291042+	.0022441+
26.15437+	17.36788+	.3283901+	.4504021+	.1441050+
1.220238+	.7291042+	15.0	1.049	

2497.100+	.0000000+	.2500000+	.002275	2038.2
.4505034+	.3890679+	.0637011+	1.157904+	296.1716+
.820721+	115.5459+	2.56337+	.5492122+	.0022392+
26.21184+	17.38399+	.2474923+	.4506315+	.1413999+
1.219107+	.5492122+	15.0	1.049	

2498.100+	2.500000-	.2500000+	.002270	2038.2
.3698870+	.406007+	.0958567+	.9187440+	296.1716+
.820721+	115.6563+	2.560790+	.4509321+	.0022400+
26.20290+	17.38399+	.2032042+	.4506315+	.2591513+
1.219107+	.4509321+	15.0	1.049	

2499.100+	2.500000-	.2500000+	.002270	2038.2
.3521040+	.3357825+	.0356078+	1.048607+	296.1716+
.6184591+	133.5530+	2.21763+	.5693246+	.0022392+
26.35053+	17.47526+	.217550+	.3821283+	.1011289+
1.616921+	.5693246+	20.0	1.049	

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2500.100+	.0000000+	.2500000+	.002266	2038.2
.4303493+	.356975+	.0366317+	1.205705+	296.4457+
.6190315+	133.6804+	2.217570+	.6951978+	.0022351+
26.39933+	17.49214+	.2656066+	.3823467+	.0851212+
1.615426+	.6951978+	20.0	1.049	
2501.100+	2.500000+	.2500000+	.002259	2038.2
.5903966+	.3882221+	.0571497+	1.520770+	296.4457+
.6125153+	133.8077+	2.215461+	.9638886+	.0022351+
26.12144+	17.30801+	.3661339+	.3798508+	.0967990+
1.632612+	.9638886+	20.0	1.049	
2502.100+	2.500000+	.2500000+	.002257	2038.2
.5477173+	.365662+	.0396860+	1.510668+	296.4457+
.4083435+	164.0350+	1.807199+	1.341314+	.0022351+
26.12144+	17.30801+	.3889039+	.2899460+	.0724572+
2.448913+	1.341314+	30.0	1.049	
2503.100+	.0000000+	.2500000+	.002243	2038.2
.4125663+	.3366283+	.0157008+	1.225583+	296.7196+
.4152429+	164.5108+	1.803648+	.9935540+	.0022310+
26.58732+	17.60045+	.2915162+	.2934075+	.0380565+
2.408228+	.9935540+	30.0	1.049	
2504.100+	2.500000-	.2500000+	.002238	2038.2
.3343210+	.3214039+	.000509-	1.040189+	296.7196+
.4174170+	164.6659+	1.801949+	.8009280+	.0022310+
26.77652+	17.69259+	.2358663+	.2944913+	.0015583-
2.335685+	.8009280+	30.0	1.049	
2505.100+	2.500000-	.2500000+	.002217	2038.2
.2845285+	.3091398+	.0027166-	.2203876+	300.1433+
.3199737+	191.0462+	1.571051+	.8892246+	.0022310+
27.00492+	18.08316+	.2155561+	.2424091+	.0341499-
3.125256+	.8892246+	40.0	1.050	
2506.100+	.0000000+	.2500000+	.002212	2038.2
.3965616+	.3170207+	.0007766+	1.245967+	300.1433+
.3156750+	191.2243+	1.569587+	1.252266+	.0022310+
26.77652+	17.89674+	.3011841+	.2405111+	.0019584+
3.157811+	1.252266+	40.0	1.050	
2507.100+	2.500000+	.2500000+	.002210	2038.2
.5157079+	.3480466+	.0332210+	1.481720+	296.7196+
.3081711+	191.4022+	1.550240+	1.673446+	.0022310+
26.30098+	17.41615+	.3942005+	.2355740+	.0644183+
3.244250+	1.673446+	40.0	1.049	

G.E.M.
FORCE

2509.100+	5.000000+	.1500000+	.002266	2034.7
.3841134+	.3281703+	.0649723+	1.170489+	.0000112+
.0000000+	94.51996+	.0000001+	0000000+	.0022659+
.0000000+	.0000000+	.3841134+	.0000000+	.1691486+
0000000+	0000000+	10.0	1.000	
2509.100+	5.500000+	.1500000+	.002266	2034.7
.2133363+	.7707559+	.0066972+	.7884414+	.0001122+
.0000000+	94.51996+	.0000011+	0000000+	.0022659+
.0000000+	.0000000+	.2133363+	.0000000+	.0313840+
0000000+	0000000+	10.0	1.000	
2510.100+	.0000000+	.1500000+	.002262	2034.7
.0479224+	.0400071+	.0550450-	.2072897+	.0001123+
.0000000+	94.61011+	.0000011+	0000000+	.0022615+
.0000000+	.0000000+	.0479224+	.0000000+	1.105489-
0000000+	0000000+	10.0	1.000	
2511.100+	2.500000-	.1500000+	.002262	2034.7
.1136114-	.0503567+	.0783323-	.4545968-	.0001123+
.0000000+	94.61011+	.0000011+	0000000+	.0022615+
.0000000+	.0000000+	.1138114-	.0000000+	.6882644+
0000000+	0000000+	10.0	1.000	
2512.100+	5.000000-	.1500000+	.002262	2034.7
.1422642-	.0400071+	.1058563-	.5922564-	.0001123+
.0000000+	94.61011+	.0000011+	0000000+	.0022615+
.0000000+	.0000000+	.1422642-	.0000000+	.7440826+
0000000+	0000000+	15.0	1.000	
2513.100+	5.000000-	.1500000+	.002254	2034.7
.0948428-	.0492290+	.1005551-	.3805448-	.0001124+
.0000000+	115.9895+	.0000009+	0000000+	.0022572+
.0000000+	.0000000+	.0948428-	.0000000+	1.060228+
0000000+	0000000+	15.0	1.000	
2514.100+	5.500000-	.1500000+	.002252	2034.7
.1090092-	.0503567+	.1001683-	.4356553-	.0001125+
.0000000+	116.0998+	.0000009+	0000000+	.0022530+
.0000000+	.0000000+	.1090692-	.0000000+	.9183922+
0000000+	0000000+	15.0	1.000	
2515.100+	.0000000+	.1500000+	.002252	2034.7
.0806164+	.0514845+	.0619485-	.3205621+	.0001125+
.0000000+	116.0998+	.0000009+	0000000+	.0022530+
.0000000+	.0000000+	.0806164+	.0000000+	.7684361-
0000000+	000.0000+	15.0	1.000	

G.E.M.
FORCE

2516.100+	2.500000+	.1500000+	.002252	2034.7
.2465913+	.2740391+	.0188449-	.0998393+	.0001125+
.0000000+	116.0998+	.0000009+	0000000+	.0022530+
.0000000+	.0000000+	.2465913+	.0000000+	.0764219-
0000000+	0000000+	15.0	1.000	
2517.100+	5.000000+	.1500000+	.002247	2034.7
.3793713+	.3236594+	.0640414+	1.172131+	.0001126+
.0000000+	116.2099+	.0000009+	0000000+	.0022487+
.0000000+	.0000000+	.3793713+	.0000000+	.1688094+
0000000+	0000000+	15.0	1.000	
2518.100+	5.000000+	.1500000+	.002243	2034.7
.3805568+	.3205581+	.0544281+	1.187169+	.0001127+
.0000000+	134.3216+	.0000008+	0000000+	.0022444+
.0000000+	.0000000+	.3805568+	.0000000+	.1430224+
0000000+	0000000+	20.0	1.000	
2519.100+	2.500000+	.1500000+	.002243	2034.7
.2418492+	.2664269+	.0169948-	.9077505+	.0001127+
.0000000+	134.3216+	.0000008+	0000000+	.0022444+
.0000000+	.0000000+	.2418492+	.0000000+	.0702703-
0000000+	0000000+	20.0	1.000	
2520.100+	.0000000+	.1500000+	.002238	2034.7
.0711321+	.2351323+	.0573696-	.3025194+	.0001128+
.0000000+	134.4485+	.0000008+	0000000+	.0022402+
.0000000+	.0000000+	.0711321+	.0000000+	.8065229-
0000000+	0000000+	20.0	1.000	
2521.100+	2.500000-	.1500000+	.002238	2034.7
.1173680-	.2385155+	.0910571-	.4920769-	.0001128+
.0000000+	134.4485+	.0000008+	0000000+	.0022402+
.0000000+	.0000000+	.1173680-	.0000000+	.7758258+
0000000+	0000000+	20.0	1.000	
2522.100+	5.000000-	.1500000+	.002238	2034.7
.1387076-	.2300575+	.1219917-	.6029257-	.0001128+
.0000000+	134.4485+	.0000008+	0000000+	.0022402+
.0000000+	.0000000+	.1387076-	.0000000+	.8794879+
0000000+	0000000+	20.0	1.000	
2523.100+	5.000000-	.1500000+	.002227	2034.7
.1351510-	.2452819+	.1221230-	.5510027-	.0001131+
.0000000+	165.1391+	.0000006+	0000000+	.0022276+
.0000000+	.0000000+	.1351510-	.0000000+	.9036039+
0000000+	0000000+	30.0	1.000	

G.E.M.
FORCE

2524.100+	2.500000-	.1500000+	.002220	2634.7
.002987-	.234168+	.1235530-	.353767-	.0001133+
.0000000+	165.2940+	.0000006+	0000000+	.0022234+
.0000000+	.0000000+	.0029874-	.0000000+	1.476765+
0000000+	0000000+	30.0	1.000	
2525.100+	.0000000+	.1500000+	.002215	2634.7
.0001000+	.2368239+	.0044330-	.3804542+	.0001133+
.0000000+	165.4487+	.0000006+	0000000+	.0022133+
.0000000+	.0000000+	.0001006+	.0000000+	.9190613-
0000000+	0000000+	30.0	1.000	
2526.100+	2.500000+	.1500000+	.002213	2634.7
.2465913+	.2599425+	.0450916-	.9466381+	.0001134+
.0000000+	165.6032+	.0000006+	0000000+	.0022151+
.0000000+	.0000000+	.2465913+	.0000000+	.1828719-
0000000+	0000000+	30.0	1.000	
2527.100+	5.000000+	.1500000+	.002213	2634.7
.3817424+	.3180207+	.0275840+	1.200369+	.0001134+
.0000000+	165.6032+	.0000006+	0000000+	.0022151+
.0000000+	.0000000+	.3817424+	.0000000+	.0722606+
0000000+	0000000+	30.0	1.000	
2528.100+	5.000000+	.1500000+	.002205	2634.7
.4001182+	.3175970+	.0214131+	1.259826+	.0001137+
.0000000+	191.5985+	.0000005+	0000000+	.0022079+
.0000000+	.0000000+	.4001182+	.0000000+	.0535171+
0000000+	0000000+	40.0	1.000	
2529.100+	2.500000+	.1500000+	.002191	2634.7
.2578530+	.2600834+	.0474228-	.9914276+	.0001140+
.0000000+	192.1320+	.0000005+	0000000+	.0021947+
.0000000+	.0000000+	.2578539+	.0000000+	.1832136-
0000000+	0000000+	40.0	1.000	
2530.100+	.0000000+	.1500000+	.002189	2634.7
.0924717+	.2448590+	.0914827-	.3776530+	.0001141+
.0000000+	192.3095+	.0000005+	0000000+	.0021906+
.0000000+	.0000000+	.0924717+	.0000000+	.9893154-
0000000+	0000000+	40.0	1.000	
2531.100+	2.500000-	.1500000+	.002189	2634.7
.0071360-	.2423216+	.1270073-	.3595916-	.0001141+
.0000000+	193.8996+	.0000005+	0000000+	.0021906+
.0000000+	.0000000+	.0071360-	.0000000+	1.457561+
0000000+	0000000+	40.0	1.000	

G.E.M.
FORGE

2532.100+	5.000000-	.1500000+	.002185	2034.7
.1600472-	.2528941+	.1313142-	.6328626-	.0001142+
.0000000+	192.4868+	.0000005+	0000000+	.0021866+
.0.000.0+	.0000000+	.160047-	.0000000+	.8204713+
.0000000+	0000000+	40.0	1.000	
2538.100+	5.000000-	.1500000+	.002362	2056.6
.4125663+	.3856847+	.0495274-	1.069698+	292.3072+
1.252904+	92.47236+	3.161022+	.3292879+	.0023216+
25.08465+	17.70183+	.1831264+	.5561285+	.1200473-
.7981453+	.3292879+	10.0	1.049	
2539.100+	2.500000-	.1500000+	.002360	2056.6
.5121513+	.4093671+	.0271921-	1.251080+	289.7828+
1.229347+	92.56351+	3.130637+	.4166049+	.0023244+
25.78546+	17.36897+	.2297317+	.5514377+	.0530939-
.8134411+	.4166049+	10.0	1.048	
2540.100+	.0000000+	.1500000+	.002360	2056.6
.6473023+	.4262831+	.0297598-	1.518479+	292.3072+
1.233629+	92.56351+	3.157909+	.5247139+	.0023208+
25.69203+	17.42949+	.2897984+	.5522981+	.0459752-
.8106163+	.5247139+	10.0	1.049	
2541.100+	2.500000+	.1500000+	.002360	2056.6
.7397741+	.4415075+	.0231582+	1.675563+	292.0292+
1.226036+	92.56351+	3.154906+	.6033865+	.0023244+
25.51825+	17.32223+	.3323278+	.5507711+	.0313045+
.8156361+	.6033865+	10.0	1.049	
2542.100+	5.000000+	.1500000+	.002355	2056.6
.9460573+	.4448907+	.0759088+	2.126493+	289.7828+
1.210236+	92.65457+	3.127561+	.7817129+	.0023244+
25.38465+	17.09898+	.4280344+	.5475596+	.0802370+
.8262849+	.7817129+	10.0	1.048	
2543.100+	5.000000+	.1500000+	.002343	2056.6
.9152333+	.4781588+	.1160023+	1.914077+	289.7828+
.7983312+	113.7028+	2.548596+	1.146433+	.0023244+
25.11744+	16.91899+	.5089348+	.4439289+	.1267461+
1.252612+	1.146433+	15.0	1.048	
2544.100+	2.500000+	.1500000+	.002343	2056.6
.8014219+	.4319218+	.0146792+	1.855479+	292.3072+
.8224194+	115.7098+	2.526207+	.9744686+	.0023208+
25.69203+	17.42949+	.4397571+	.4512788+	.0183164+
1.215924+	.9744686+	15.0	1.049	

G, F. M.
FORCE

2545.100+	.0000000+	.1500000+	.002339	2056.6
.6591577+	.4025007+	.0023875-	1.337249+	290.0586+
.8160931+	113.8140+	2.548530+	.8076971+	.0023200+
25.70072+	17.27542+	.3523536+	.4493674+	.036221-
1.225350+	.876991+	15.0	1.048	

2546.100+	2.500000-	.1500000+	.002339	2056.6
.4836984+	.400345+	.0115681+	1.208203+	289.7828+
.8153170+	113.8140+	2.5485106+	.5732642+	.0023236+
25.66053+	17.27397+	.2664539+	.4491320+	.023916+
1.226515+	.5932642+	15.0	1.048	

2547.100+	5.000000-	.1500000+	.002339	2056.6
.3935977+	.3856847+	.0086153+	1.020516+	290.0586+
.8245941+	113.8140+	2.548530+	.4773230+	.0023200+
25.96843+	17.47558+	.2157179+	.4519328+	.0218886+
1.212717+	.4773230+	15.0	1.048	

2548.100+	5.000000-	.1500000+	.002325	2056.6
.3953399+	.355985+	.0360700-	1.129406+	292.3072+
.62453+	131.8101+	2.217637+	.6358663+	.0023200+
26.10229+	17.70183+	.2449133+	.3851648+	.090558-
1.596290+	.6358663+	20.0	1.049	

2549.100+	2.500000-	.1500000+	.002325	2056.6
.4730286+	.3560217+	.0375831-	1.328427+	292.3072+
.624523+	131.8101+	2.217637+	.7550912+	.0023208+
26.09347+	17.70183+	.2908346+	.3851648+	.0796636-
1.596290+	.7550912+	20.0	1.049	

2550.100+	.0000000+	.1500000+	.002330	2056.6
.6152929+	.3797641+	.015380+	1.520197+	292.5849+
.6174006+	131.8101+	2.221902+	.9965851+	.0023156+
25.74958+	17.44605+	.3804208+	.3817239+	.0471942+
1.619693+	.9965861+	20.0	1.049	

2551.100+	2.500000+	.1500000+	.002325	2056.6
.7611137+	.4135961+	.0484797+	1.840234+	292.5849+
.6102693+	131.8101+	2.219744+	1.245747+	.0023156+
25.43135+	17.26432+	.4724570+	.3792557+	.0636958+
1.636743+	1.245747+	20.0	1.049	

2552.100+	5.000000+	.1500000+	.002325	2056.6
.8927082+	.4499655+	.0775061+	1.983947+	290.3347+
.5993878+	131.8101+	2.202659+	1.488125+	.0023156+
25.21313+	16.95119+	.5579817+	.3749561+	.1092250+
1.666978+	1.488125+	20.0	1.048	

G.E.M.
FORCE

2553.100+	5.00000+	.1500000+	.002317	2056.6
.8464723+	.4544764+	.1101496+	1.862521+	290.5096+
.3960459+	161.7553+	1.796599+	2.137308+	.023112+
24.99224+	16.78676+	.6063355+	.2836911+	.1301279+
2.524959+	2.137308+	30.0	1.048	

2554.100+	2.500000+	.1500000+	.002310	2056.6
.7136923+	.3907595+	.0302148+	1.826423+	290.5096+
.4045630+	162.0679+	1.793134+	1.764106+	.023114+
25.53834+	17.14777+	.5081241+	.2880347+	.0423359+
2.471802+	1.764106+	30.0	1.048	

2555.100+	.0000000+	.1500000+	.002305	2056.6
.5619430+	.3631301+	.0036700+	1.547499+	29.8846+
.4092085+	162.2239+	1.793105+	1.373245+	.123061+
25.85604+	17.34467+	.3987655+	.2703818+	.0065309+
2.443741+	1.373245+	30.0	1.048	

2556.100+	2.500000-	.1500000+	.002305	2056.6
.4457613+	.3501611+	.0129129+	1.273017+	290.8846+
.4113398+	162.2239+	1.793105+	1.083681+	.0023061+
25.99071+	17.43501+	.3158426+	.2914534+	.0289682+
2.431279+	1.083681+	30.0	1.048	

2557.100+	5.000000-	.1500000+	.002305	2056.6
.3366920+	.3467779+	.0020052-	.9709153+	290.8846+
.4156024+	162.2239+	1.793105+	.8101301+	.123061+
26.26004+	17.61568+	.2378436+	.2935869+	.0059557-
2.406145+	.8101301+	30.0	1.048	

2558.100+	5.000000-	.1500000+	.002294	2056.6
.3129813+	.3205581+	.0450511-	.9763636+	291.1594+
.3167962+	187.8693+	1.549797+	.9879579+	.0023017+
26.71445+	17.90359+	.2376839+	.2405810+	.1439419-
3.156603+	.9879579+	40.0	1.048	

2559.100+	2.500000-	.1500000+	.002278	2056.6
.3965616+	.3298619+	.0226837-	1.202204+	293.1396+
.3157289+	188.4074+	1.555881+	1.256019+	.0023061+
26.39471+	17.84327+	.3014006+	.2399650+	.0572011-
3.167273+	1.256019+	40.0	1.049	

2560.100+	.000000+	.1500000+	.002278	2056.6
.5317126+	.3459321+	.015966-	1.53743+	293.1396+
.3108963+	188.4074+	1.555881+	1.710256+	.023061+
25.99071+	17.57016+	.405699+	.2371632+	.0030028-
3.21655+	1.710256+	40.0	1.049	

G.E.M.
FORCE

2561.100+	2.500000+	.1500000+	.002271	2056.6
.6721986+	.3746893+	.039246+	1.794.15+	290.8846+
.3021109+	18.7652+	1.540985+	2.225005+	.0023061+
25.45204+	17.07366+	.5162375+	.230163+	.0583846+
3.310041+	2.225005+	40.0	1.048	

2562.100+	5.000000+	.1500000+	.002271	2056.6
.8037930+	.4275518+	.0869215+	1.879989+	290.8846+
.2957171+	18.7652+	1.540985+	2.718114+	.002353+
24.92160+	16.71231+	.6203460+	.2202265+	.1081391+
3.321610+	2.712114+	40.0	1.048	

2563.100+	5.000000+	.1000000+	.002319	2061.5
.4410191+	.3484695+	.1244005+	1.265588+	.001110+
.000000+	92.91095+	.0000011+	0000000+	.0023692+
.0000000+	.0000000+	.4410191+	.0000000+	.2820751+
0000000+	0000000+	10.0	1.000	

2564.100+	2.500000+	.1000000+	.002319	2061.5
.2774152+	.3027963+	.0285257+	.9161777+	.0001110+
.0000000+	92.91095+	.0000011+	0000000+	.0023450+
.0000000+	.0000000+	.2774152+	.0000000+	.1028306+
0000000+	0000000+	10.0	1.000	

2565.100+	.0000000+	.1000000+	.002336	2061.5
.0426792+	.2503567+	.0104271-	.1704738+	.0001111+
.0000000+	93.00147+	.0000011+	0000000+	.0023405+
.0000000+	.0000000+	.0426792+	.0000000+	.2157205-
0000000+	0000000+	10.0	1.000	

2566.100+	2.500000-	.1000000+	.002336	2061.5
.1209246-	.2503567+	.0740495-	.4830091-	.0011113+
.0000000+	93.00147+	.000119+	0000000+	.0023405+
.0000000+	.0000000+	.1209246-	.0000000+	.6123611+
0000000+	0000000+	10.0	1.000	

2567.100+	5.000000-	.1000000+	.002331	2061.5
.1778303-	.2571231+	.0450584-	.6915152-	.0001112+
.0000000+	93.09189+	.0000011+	0000000+	.0023359+
.0000000+	.000000+	.1778303-	.0000000+	.2533786+
0000000+	0000000+	10.0	1.000	

2568.100+	5.000000-	.1000000+	.002330	2061.5
.1422642-	.2559954+	.0743542-	.5557296-	.0001112+
.0000000+	114.0196+	0000009+	0000000+	.0023359+
.0000000+	.000000+	.1422642-	.0000000+	.5225489+
0000000+	0000000+	15.0	1.000	

G.E.M.
FORCE

2569.100+	2.500000-	.1000000+	.002325	2061.5
.1232956-	.2481013+	.0927657-	.4969570-	.0001113+
.0000000+	114.1303+	.0000009+	0000000+	.0023314+
.0000000+	.0000000+	.1232956-	.0000000+	.7523044+
0000000+	0000000+	15.0	1.000	
2570.100+	.0000000+	.1000000+	.002325	2061.5
.0711321+	.2543677+	.0398930-	.2790943+	.0001113+
.0000000+	114.1303+	.0000009+	0000000+	.0023314+
.0000000+	.0000000+	.0711321+	.0000000+	.5608296-
0000000+	0000000+	15.0	1.000	
2571.100+	2.500000+	.1000000+	.002325	2061.5
.2845285+	.2909551+	.0137575+	.9779118+	.0001113+
.0000000+	114.1303+	.0000009+	0000000+	.0023314+
.0000000+	.0000000+	.2845285+	.0000000+	.0483536+
0000000+	0000000+	15.0	1.000	
2572.100+	5.000000+	.1000000+	.002325	2061.5
.4552456+	.3304258+	.0744094+	1.377754+	.0001113+
.0000000+	114.1303+	.0000009+	0.00000+	.0023314+
.0000000+	.0000000+	.4552456+	.0000000+	.1634490+
0000000+	0000000+	15.0	1.000	
2573.100+	5.000000+	.1000000+	.002318	2061.5
.4516890+	.3332451+	.0838448+	1.355425+	.0001115+
.0000000+	132.0483+	.0000008+	000 000+	.0 23224+
.0000000+	.0000000+	.4516890+	.0000000+	.1856252+
0000000+	0000000+	20.0	1.000	
2574.100+	2.500000+	.1000000+	.002316	2061.5
.2951983+	.2731933+	.0354066+	1.080547+	.0001116+
.0000000+	132.1757+	.0000008+	0000000+	.0023179+
.0000000+	.0000000+	.2951983+	.0000000+	.1199418+
0000000+	0000000+	20.0	1.000	
2575.100+	.0000000+	.1000.00+	.002316	2061.5
.0640183+	.2359781+	.0438903-	.2712916+	.0001116+
.0000000+	132.1757+	.0000008+	0000000+	.0023179+
.0000000+	.0000000+	.0640183+	.0000000+	.6855805-
0000000+	0000000+	20.0	1.000	
2576.100+	2.500000-	.10 0000+	.002311	2061.5
.1387076-	.2325949+	.0965922-	.5963484-	.0001117+
.0000000+	132.3023+	.0000008+	000 000+	.0023135+
.0000000+	.0000000+	.1387076-	.0000000+	.6963731+
0000000+	0000000+	20.0	1.000	

G.E.M.
FORCE

2577.100+ .1778303- .0000000+ .0000000+ 0000000+	5.0.0000- .2402071+ 132.3029+ .0000000+ 0000000+	.1000000+ .0888225- .0000008+ .1778303- 20.0	.002311 .7403205- 0000000+ .0000000+ 1.000	2061.5 .0001117+ .0023135+ .4994790+
2578.100+ .1802013- .0000000+ .0000000+ 0000000+	5.000000- .2520483+ 162.8229+ .0000000+ 0000000+	.1000000+ .1075702- .0000006+ .1802013- 30 0	.002291 .7149476- 0000000+ .0000000+ 1.000	2061.5 .0001123+ .0022914+ .5969444+
2579.100+ .1327799- .0000000+ .0000000+ 0000000+	2.500000- .2362601+ 162.8229+ .0000000+ 0000000+	.1000000+ .1179822- .0000006+ .1327799- 30.0	.002291 .5620075- 0000000+ .0000000+ 1.000	2061.5 .0001123+ .0022914+ .8885544+
2580.100+ .0758742+ .0000000+ .0000000+ 0000000+	.0000000+ .2379517+ 162.9779+ .0000000+ 0.00000+	.1000000+ .0733717- .0000000+ .0758742+ 30.0	.002284 .3188641+ 0.00000+ .0000000+ 1 000	2061.5 .0000112+ .0022871+ .9670176-
2581.100+ .3082392+ .0000000+ .0000000+ 0000000+	2.500000+ .2712198+ 162.9779+ .0000000+ 0000000+	.1000000+ .0238349- .0000006+ .3082392+ 30.0	.002284 1.136492+ 0000000+ .0000000+ 1 000	2061.5 .0001124+ .0022871+ .0773262-
2582.100+ .4599877+ .0000000+ .0000000+ 0000000+	5.000000+ .3298619+ 163.1327+ .0000000+ 0000000+	.10.0000+ .0552028+ .0000006+ .4599877+ 30.0	.002281 1.394485+ 0000000+ .0000000+ 1.000	2061.5 .0001125+ .0022827+ .1200093+
2583.100+ .4516890+ .0000000+ .0000000+ 000000+	5.000000+ .3252100+ 188.7460+ .0000000+ 0000000+	.1000000+ .0413750+ .0000005+ .4516890+ 40.0	.002271 1.388914+ 0000000+ .0000000+ 1.000	2061.5 .0001127+ .0022741+ .0916006+
2584.100+ .2951983+ .0 00000+ .000000+ 0.0000+	2.500000+ .2706559+ 188.9243+ .0000000+ 0000000+	.1000000+ .0326996- .0000005+ .2951983+ 40.0	.002266 1.090677+ 000000+ .000000+ 1.000	2061.5 .0001128+ .0022698+ .1107717-

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2585.100+	.0000000+	.1000000+	.002262	2061.5
.0782453+	.2465506+	.0732854-	.3173600+	.0001129+
.0000000+	189.1025+	.0000005+	0000000+	.0022655+
.0000000+	.0000000+	.0782453+	.0000000+	.9366116-
0000000+	0000000+	40.0	1.000	
2586.100+	2.500000-	.1000000+	.002257	2061.5
.1475991-	.2495109+	.1142725-	.5915537-	.0001130+
.0000000+	189.2804+	.0000005+	0000000+	.0022613+
.0000000+	.0000000+	.1475991-	.0000000+	.7742085+
0000000+	0000000+	40.0	1.000	
2587.100+	5.000000-	.1000000+	.002255	2061.5
.2009482-	.2596605+	.1185296-	.7738882-	.0001131+
.0000000+	0000000+	0000000+	0000000+	.0022570+
.0000000+	.0000000+	.2009482-	.0000000+	.5898517+
0000000+	0000000+	40.0	1.000	
2593.100+	5.000000-	.1000000+	.002319	2061.5
.5263777+	.3332451+	.022447-	1.579551+	293.9696+
1.240645+	93.35623+	3.148901+	.4242774+	.0023001+
25.92374+	17.52862+	.234924+	.5536999+	.0426447-
.8060322+	.4242774+	10.0	1.049	
2594.100+	2.500000-	.1000000+	.002317	2061.5
.6615287+	.3518527+	.0240393+	1.880129+	293.9696+
1.234183+	93.44630+	3.145866+	.5360052+	.0023001+
25.76873+	17.43732+	.2960942+	.5524091+	.0363390+
.8102523+	.5360052+	10.0	1.049	
2595.100+	.0000000+	.1000000+	.002317	2061.5
.8606987+	.3653855+	.0600251+	2.355590+	293.9696+
1.221260+	93.53628+	3.142840+	.7047628+	.0022993+
25.52790+	17.25473+	.3874822+	.5498050+	.0697400+
.8188264+	.7047628+	10.0	1.049	
2596.100+	2.500000+	.1000000+	.002317	2061.5
.9602837+	.3552359+	.0211134+	2.703227+	294.2457+
1.222407+	93.53628+	3.145792+	.7855677+	.0022950+
25.57528+	17.27094+	.4320916+	.5500374+	.0219866+
.8180579+	.7855677+	10.0	1.049	
2597.100+	5.000000+	.1000000+	.002317	2061.5
1.102547+	.3400115+	.0809134+	3.242677+	294.2457+
1.215939+	93.53628+	3.145792+	.9067457+	.0022950+
25.43996+	17.17956+	.4975532+	.5487241+	.0733877+
.8224093+	.9067457+	10.0	1.049	

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2598.100+	5.000000+	.1000000+	.002308	2061.5
1.132114+	.4477100+	.1179534+	2.542078+	291.9823+
.7915547+	114.6721+	2.546236+	1.437821+	.0022950+
25.03400+	16.77538+	.6352661+	.4418255+	.1036394+
1.263336+	1.437821+	15.0	1.048	

2599.100+	2.500000+	.1000000+	.002308	2061.5
.9484283+	.4161335+	.0494323+	2.279144+	293.9696+
.3098655+	114.6721+	2.563566+	1.171093+	.0022933+
25.39223+	17.16344+	.5240325+	.4474727+	.0521203+
1.234772+	1.171093+	15.0	1.049	

2600.100+	.0000000+	.1000000+	.002308	2061.5
.820390+	.3368125+	.0354804+	2.120899+	291.9823+
.8086694+	114.6721+	2.546236+	1.014494+	.0022950+
25.57528+	17.13809+	.4535878+	.4471073+	.0432433+
1.236599+	1.014494+	15.0	1.048	

2601.100+	2.500000-	.1000000+	.002305	2061.5
.6144794+	.3576410+	.0198832+	1.676848+	291.7083+
.814597+	114.7821+	2.541409+	.750628+	.0022933+
25.79743+	17.30319+	.3393845+	.4494785+	.0322528+
1.224800+	.750628+	15.0	1.048	

2602.100+	5.000000-	.1000000+	.002305	2061.5
.4647292+	.3642578+	.0248216+	1.275826+	293.9696+
.3314045+	114.7821+	2.561110+	.5569696+	.0022933+
26.06756+	17.61991+	.2537560+	.4539709+	.0534108+
1.202783+	.5589696+	15.0	1.049	

2603.100+	5.000-	.1000000+	.002236	2061.5
.4908116+	.0000000+	.0089213-	1.465386+	291.7083+
.6187568+	.3349367+	2.196645+	.7932222+	.0022993+
26.06756+	132.7971+	.3032028+	.3822419+	.0181766-
1.616143+	.7932222+	20.0	1.048	

2604.100+	2.500000-	.1000000+	.002285	2061.5
.6224061+	.3417031+	.0167713-	1.821481+	293.9696+
.6203225+	133.0503+	2.209461+	1.003358+	.0022993+
25.93249+	17.52862+	.3841248+	.3828389+	.0269459-
1.612064+	1.003358+	20.0	1.049	

2605.100+	.0000000+	.1000000+	.002285	2061.5
.7860100+	.3679229+	.034500+	2.136343+	293.6932+
.610558+	133.0503+	2.207383+	1.288423+	.0023036+
25.47931+	17.23851+	.4881880+	.3789035+	.235776-
1.639194+	1.288423+	20.0	1.049	

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2606.100+	2.500000+	.1000000+	.002285	2061.5
.9318308+	.3916053+	.0482378+	2.379515+	293.6932+
.6036002+	133.0503+	2.207383+	1.543788+	.0023036+
25.20969+	17.05609+	.5810867+	.3764031+	.0517677+
1.656725+	1.543788+	20.0	1.049	

2607.100+	5.000000+	.1000000+	.002285	2061.5
1.113217+	.4389701+	.1123759+	2.535976+	291.4340+
.5893482+	133.0503+	2.190403+	1.888896+	.0023036+
24.80526+	16.65337+	.7004241+	.3708117+	.1009469+
1.696789+	1.888896+	20.0	1.048	

2608.100+	5.000000+	.1000000+	.002267	2061.5
1.057497+	.4448907+	.0861948+	2.375982+	291.7083+
.3932685+	163.5796+	1.783280+	2.688995+	.0022993+
24.85197+	16.66904+	.7590048+	.2822633+	.0815083+
2.542791+	2.688995+	30.0	1.043	

2609.100+	2.500000+	.1000000+	.002263	2061.5
.8891515+	.3975259+	.0507065+	2.236713+	291.7083+
.3975432+	163.7338+	1.781600+	2.236616+	.0022993+
25.12210+	16.85023+	.6362247+	.2844586+	.0570279+
2.515442+	2.236616+	30.0	1.043	

2610.100+	.0000000+	.1000000+	.002258	2061.5
.7326609+	.3687687+	.029500+	1.986775+	293.9696+
.4070864+	163.8879+	1.793723+	1.799766+	.0022993+
25.52730+	17.25473+	.5206935+	.2893117+	.0077606-
2.456479+	1.799766+	30.0	1.049	

2611.100+	2.500000-	.1000000+	.002258	2061.5
.5524595+	.3484695+	.0062010+	1.585388+	294.2457+
.4160927+	163.8879+	1.795408+	1.327731+	.0022950+
26.11656+	17.63647+	.3901294+	.2938315+	.0112244+
2.403310+	1.327731+	30.0	1.049	

2612.100+	5.000000-	.1000000+	.002253	2061.5
.4362770+	.3417031+	.0142620+	1.276772+	294.2457+
.4182487+	163.8879+	1.795408+	1.043104+	.0022950+
26.25187+	17.72785+	.3076167+	.2349050+	.0326903+
2.390921+	1.043104+	30.0	1.049	

2613.100+	5.000000-	.1000000+	.002242	2061.5
.4036748+	.3218268+	.0278246-	1.254322+	293.9696+
.3182383+	189.9613+	1.547523+	1.268466+	.0022993+
26.60782+	17.98509+	.3062229+	.2414118+	.689284-
3.142298+	1.268466+	40.0	1.049	

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2614.100+	2.500000-	.1000000+	.002237	2061.5
.5192645+	.3302846+	.0022100+	1.572171+	291.7033+
.3077754+	190.1385+	1.534186+	1.687154+	.0022923+
25.93249+	17.39376+	.3970594+	.2353427+	.0042561+
3.249112+	1.687154+	40.0	1.048	
2615.100+	.0000000+	.1000000+	.002237	2061.5
.6010901+	.3526985+	.0291234+	1.931082+	293.9636+
.3036995+	190.1385+	1.546081+	2.242644+	.0022993+
25.39223+	17.16344+	.5224287+	.2329521+	.427600+
3.292727+	2.242644+	40.0	1.049	
2616.100+	2.500000+	.1000000+	.002235	2061.5
.8393591+	.3797641+	.6485314+	2.210211+	291.7033+
.2949514+	190.3154+	1.532762+	2.8457.3+	.0023001+
24.84352+	16.66904+	.6481780+	.2277702+	.0578196+
3.390358+	2.845753+	40.0	1.048	
2617.100+	5.000000+	.1000000+	.002235	2061.5
1.010076+	.4305121+	.0934620+	2.346219+	293.9636+
.2891507+	190.3154+	1.544643+	3.493130+	.0022993+
24.17665+	16.34179+	.7835145+	.2243015+	.0925297+
3.456253+	3.493130+	40.0	1.049	
2618.100+	2.500000+	.0500000+	.002296	2061.5
.5121513+	.3061795+	.0334846+	1.572715+	.0001122+
.0000000+	93.90179+	.0000011+	0000000+	.0022958+
.0000000+	.0000000+	.5121513+	.0000000+	.0653807+
0000000+	0000000+	10.0	1.000	
2619.100+	.0000000+	.0500000+	.002296	2061.5
.1138114+	.2469735+	.0550597-	.4608212+	.0001122+
.0000000+	93.90179+	.0000011+	0000000+	.0022958+
.0000000+	.0000000+	.1138114+	.0000000+	.4837808-
0000000+	0000000+	10.0	1.000	
2620.100+	2.500000-	.0500000+	.002296	2061.5
.0497924+	.2520483+	.0752203-	.1975513+	.001122+
.0000000+	93.90179+	.0000011+	0000000+	.0022958+
.0000000+	.0000000+	.0497924+	.0000000+	1.510676-
0000000+	0000000+	10.0	1.000	
2621.100+	2.500000-	.0500000+	.002291	2061.5
.0521635+	.2559954+	.0746126-	.2037675+	.0001123+
.0000000+	115.1213+	.0000000+	0000000+	.0022914+
.0000000+	.0000000+	.0521635+	.0000000+	1.430360-
0000000+	0000000+	15.0	1.000	

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2622.100+	.0000000+	.0500000+	.002284	2061.5
.1375221+	.2526122+	.0781007-	.5444000+	.0001124+
.0000000+	115.2309+	.0000000+	0000000+	.0022871+
.0000000+	.0000000+	.1375221+	.0000000+	.5679724-
0000000+	0000000+	15.0	1.000	

2623.100+	2.500000+	.0500000+	.002284	2061.5
.5406041+	.3011047+	.0049764+	1.795402+	.0001124+
.0000000+	115.2309+	.0000000+	0000000+	.0022871+
.0000000+	.0000000+	.5406041+	.0000000+	.0092053+
0000000+	0000000+	15.0	1.000	

2624.100+	2.500000+	.0500000+	.002277	2061.5
.5370475+	.3027963+	.0123703+	1.773626+	.0001126+
.0000000+	133.3168+	.0000000+	0000000+	.0022784+
.0000000+	.0000000+	.5370475+	.0000000+	.0230339+
0000000+	0000000+	20.0	1.000	

2625.100+	.0000000+	.0500000+	.002272	2061.5
.1422642+	.2427445+	.0546608-	.5860656+	.0001127+
.0000000+	133.4429+	.0000000+	0000000+	.0022741+
.0000000+	.0000000+	.1422642+	.0000000+	.3242203-
0000000+	0000000+	20.0	1.000	

2626.100+	2.500000-	.0500000+	.002272	2061.5
.0675755+	.2402071+	.0398431-	.2813218+	.0001127+
.0000000+	133.4429+	.0000000+	0000000+	.0022741+
.0000000+	.0000000+	.0675755+	.0000000+	1.329521-
0000000+	0000000+	20.0	1.000	

2627.100+	2.500000-	.0500000+	.002258	2061.5
.0521635+	.2514845+	.0623330-	.2074225+	.0000113+
.0000000+	163.9048+	.0000000+	0000000+	.0022613+
.0000000+	.0000000+	.0521635+	.0000000+	1.195050-
0000000+	0000000+	30.0	1.000	

2628.100+	.0000000+	.0500000+	.002258	2061.5
.1564906+	.2464097+	.0325074-	.6350832+	.0001130+
.0000000+	163.9048+	.0000000+	0000000+	.0022613+
.0000000+	.0000000+	.1564906+	.0000000+	.5272355-
0000000+	0000000+	30.0	1.000	

2629.100+	2.500000+	.0500000+	.002256	2061.5
.5524595+	.3033602+	.0024586-	1.821133+	.0001131+
.0000000+	164.0588+	.0000000+	0000000+	.0022570+
.0000000+	.0000000+	.5524595+	.0000000+	.0044502-
0000000+	0000000+	30.0	1.000	

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2630.100+	2.500000+	.0000000+	.002241	2061.5
.5601655+	.3019505+	.0071601-	1.855156+	.0001134+
.0000000+	189.9907+	.0000005+	0000000+	.0022444+
.0000000+	.0000000+	.5601655+	.0000000+	.0133178-
0000000+	0000000+	40.0	1.000	

2631.100+	.0000000+	.0000000+	.002234	2061.5
.1600471+	.2482422+	.0745785-	.6447221+	.0001137+
.0000000+	190.3448+	.0000005+	0000000+	.0022360+
.0000000+	.0000000+	.1600472+	.0000000+	.4550779-
0000000+	0000000+	40.0	1.000	

2632.100+	2.500000-	.0000000+	.002234	2061.5
.0533490+	.2562773+	.0094107-	.2081693+	.0001137+
.0000000+	190.3448+	.0000005+	0000000+	.0022360+
.0000000+	.0000000+	.0533490+	.0000000+	1.570058-
0000000+	0000000+	40.0	1.000	

2636.100+	2.500000-	.0000000+	.002282	2061.5
1.415529+	.1759263+	.0300723-	8.045145+	291.1594+
1.177586+	94.16536+	3.092001+	1.202060+	.0023087+
24.75019+	16.63768+	.6500452+	.5407758+	.0212046-
.8491946+	1.202060+	10.0	1.048	

2637.100+	.0000000+	.0000000+	.002282	2061.5
1.579133+	.2080667+	.0194016+	7.569549+	291.1594+
1.164788+	94.16536+	3.092001+	1.355726+	.0023087+
24.48117+	16.45684+	.7294636+	.5380606+	.0122862+
.8585266+	1.355726+	10.0	1.048	

2638.100+	2.500000+	.0000000+	.002282	2061.5
1.493774+	.2469735+	.0163941+	6.048317+	291.1594+
1.171136+	94.16536+	3.092001+	1.275437+	.0023087+
24.61565+	16.54726+	.6879993+	.5324222+	.0109719+
.8538352+	1.275437+	10.0	1.048	

2639.100+	2.500000+	.0000000+	.002278	2061.5
1.323057+	.2785501+	.0507800+	4.749800+	291.4340+
.7772563+	115.4418+	2.524508+	1.702215+	.0023044+
24.52736+	16.47235+	.7444302+	.4373319+	.0383802+
1.206577+	1.702215+	15.0	1.043	

2640.100+	.0000000+	.0000000+	.002278	2061.5
1.289862+	.2516122+	.0311107+	5.106096+	291.7003+
.7822625+	115.4616+	2.526451+	1.643887+	.0023001+
24.70357+	16.57845+	.7237219+	.4389154+	.0241194+
1.278343+	1.643887+	15.0	1.048	

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2641.100+	2.500000-	.0500000+	.002273	2061.5
1.104919+	.2255466+	.0000720+	4.898819+	291.7083+
.7900113+	115.5511+	2.511445+	1.397195+	.0023001+
24.97861+	16.75964+	.6169933+	.4415940+	.000199+
1.264523+	1.397195+	15.0	1.048	
2642.100+	2.500000+	.0500000+	.002333	2050.9
1.266151+	.3146375+	.0547386+	4.898819+	289.5152+
.5791042+	131.6091+	2.199811+	2.186397+	.0023594+
23.95569+	16.36390+	.8018165+	.3667095+	.0432323+
1.726604+	2.186397+	20.0	1.049	
2643.100+	.0000000+	.0500000+	.002333	2050.9
1.155897+	.2833429+	.0217618+	4.079497+	289.7956+
.5892200+	131.6091+	2.201941+	1.961740+	.0023548+
24.39775+	16.64975+	.7273360+	.3707605+	.0158267+
1.697156+	1.961740+	20.0	1.049	
2644.100+	2.500000-	.0500000+	.002328	2050.9
.9602837+	.2579689+	.0049505-	3.722477+	290.0756+
.5961657+	131.7376+	2.201920+	1.610766+	.0023503+
24.70921+	16.84601+	.6016190+	.3734986+	.0051512-
1.677305+	1.610766+	20.0	1.049	
2645.100+	2.500000-	.0500000+	.002311	2050.9
.8322458+	.2796778+	.0037606+	2.975730+	287.8444+
.3964955+	161.2783+	1.777055+	2.099004+	.0023503+
24.84135+	16.80582+	.5959531+	.283718+	.0043186+
2.522096+	2.099004+	30.0	1.048	
2646.100+	.0000000+	.0500000+	.002306	2050.9
1.031415+	.3089989+	.0362070+	3.337927+	288.1221+
.3042117+	162.1349+	1.777051+	2.684496+	.0023449+
24.10314+	16.28516+	.7451286+	.2775672+	.0351042+
2.600731+	2.684496+	30.0	1.048	
2647.100+	2.500000+	.0500000+	.002306	2050.9
1.178420+	.3388830+	.0682301+	3.477363+	288.1221+
.3736565+	162.1349+	1.777051+	3.153757+	.0023457+
23.43302+	15.83777+	.8570725+	.2720159+	.0770995+
2.676254+	3.153757+	30.0	1.048	
2648.100+	2.500000+	.0500000+	.002288	2050.9
1.120331+	.3565046+	.0677605+	3.142542+	288.3996+
.2725811+	188.1381+	1.532913+	4.109976+	.0023412+
22.81494+	15.40519+	.8803552+	.2141998+	.0604826+
3.663537+	4.109976+	40.0	1.048	

G.E.M.
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2649.100+	.0000000+	.0000000+	.002283	2050.9
.9567471+	.3226726+	.0491706+	2.965000+	290.9145+
.2577543+	18.2654+	1.545071+	3.374305+	.002337+
23.97008+	16.26230+	.742942+	.2234543+	.013946+
3.475166+	3.344805+	40.0	1.049	

2650.100+	2.500000-	.0500000+	.002279	2050.9
.7700071+	.3043108+	.0232200+	2.525345+	291.1336+
.2992315+	18.4277+	1.544614+	2.573275+	.0023716+
24.47065+	16.91093+	.5926620+	.2303142+	.0301557+
3.341093+	2.573275+	40.0	1.049	

2651.100+	2.500000+	.0300000+	.002323	2050.9
.7104344+	.3247871+	.0034244+	2.212016+	.0000111+
.0000000+	93.24170+	.0000001+	0000000+	.0023284+
.0000000+	.0000000+	.7104344+	.0000000+	.0022814+
0000000+	0000000+	10.0	1.000	

2652.100+	.0000000+	.0300000+	.002319	2050.9
.2133003+	.2554315+	.0099134-	.8354346+	.0001112+
.0000000+	93.33236+	.0000011+	0000000+	.0023239+
.0000000+	.0000000+	.2133963+	.0000000+	.0164556-
0000000+	0000000+	10.0	1.000	

2653.100+	2.500000-	.0300000+	.002319	2050.9
.3129813+	.2571231+	.0208184-	1.217242+	.0001112+
.0000000+	93.33236+	.0000011+	0000000+	.0023239+
.0000000+	.0000000+	.3129813+	.0000000+	.0165166-
0000000+	0000000+	10.0	1.000	

2654.100+	2.500000-	.0300000+	.002318	2050.9
.2797863+	.2505063+	.0227485-	1.074009+	.0001112+
.0000000+	111.3083+	.0000007+	0000000+	.0023239+
.0000000+	.0000000+	.2797863+	.0000000+	.0102344-
0000000+	0000000+	15.0	1.000	

2655.100+	.0000000+	.0300000+	.002313	2050.9
.2371070+	.2582509+	.0271159-	.9181268+	.0001113+
.0000000+	111.4251+	.0000009+	0000000+	.0023194+
.0000000+	.0000000+	.2371070+	.0000000+	.1133614-
0000000+	0000000+	15.0	1.000	

2656.100+	2.500000+	.0300000+	.002313	2050.9
.7255477+	.3225317+	.0735984+	2.249539+	.0001113+
.0000000+	111.4251+	.0000009+	0000000+	.0023194+
.0000000+	.0000000+	.7255477+	.0000000+	.0735731+
0000000+	0000000+	15.0	1.000	

G.E.M.
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2657.100+	2.500000+	.0300000+	.002311	2050.9
.7184344+	.328173+	.0739293+	2.189211+	.0000111+
.0000000+	132.2616+	.0000000+	0000000+	.0023149+
.0000000+	.0000000+	.7184344+	.0000000+	.1029034+
0000000+	0000000+	20.0	1.000	
2658.100+	.0000000+	.0300000+	.002306	2050.9
.2347360+	.2495109+	.214346-	.9407843+	.0001115+
.0000000+	132.3894+	.0000008+	0000000+	.0023104+
.0000000+	.0000000+	.2347360+	.0000000+	.0913137-
0000000+	0000000+	20.0	1.000	
2659.100+	2.500000-	.0300000+	.002306	2050.9
.2631888+	.2571231+	.324505-	1.023590+	.0001115+
.0000000+	132.3894+	.0000008+	0000000+	.0023104+
.0000000+	.0000000+	.2631888+	.0000000+	.1232977-
0000000+	0000000+	20.0	1.000	
2660.100+	2.500000-	.0300000+	.002299	2050.9
.2537045+	.2650173+	.0204795-	.9573132+	.0001117+
.0000000+	162.4644+	.0000006+	0000000+	.0023015+
.0000000+	.0000000+	.2537045+	.0000000+	.0807219-
0000000+	0000000+	30.0	1.000	
2661.100+	.0000000+	.0300000+	.002295	2050.9
.237107+	.2520483+	.0376145-	.9407205+	.0001118+
.0000000+	164.7910+	.0000006+	0000000+	.0022971+
.0000000+	.0000000+	.2371070+	.0000000+	.1586393-
0000000+	0000000+	30.0	1.000	
2662.100+	2.500000+	.0300000+	.002293	2050.9
.7255477+	.3242233+	.0457103+	2.237802+	.0001119+
.0000000+	162.7765+	.0000006+	0000000+	.0022927+
.0000000+	.0000000+	.7255477+	.0000000+	.0630011+
0000000+	0000000+	30.0	1.000	
2663.100+	2.500000+	.0300000+	.002282	2050.9
.7255477+	.3167520+	.0407628+	2.290585+	.0001122+
.0000000+	188.3374+	.0000005+	0000000+	.0022840+
.0000000+	.0000000+	.7255477+	.0000000+	.0561821+
0000000+	0000000+	40.0	1.000	
2664.100+	.0000000+	.0300000+	.002271	2050.9
.2454058+	.2579689+	.0453984-	.9512998+	.0001124+
.0000000+	188.6965+	.0000005+	0000000+	.0022753+
.0000000+	.0000000+	.2454058+	.0000000+	.1849934-
0000000+	0000000+	40.0	1.000	

G.E.M.
FORCE

2665.100+	2.500000-	.0300000+	.002268	2050.9
.2560756+	.2719246+	.0282008-	.9417154+	.0000112+
.0000000+	188.8757+	.0000000+	0000000+	.0022710+
.0000000+	.0000000+	.2560756+	.0000000+	.1101269-
0000000+	0000000+	40.0	1.000	
2669.100+	2.500000-	.0300000+	.002330	2053.0
2.546530+	.0761219+	.1186146-	33.45327+	290.6352+
1.109026+	93.09960+	3.121767+	2.296185+	.0023460+
22.98043+	15.66903+	1.207443+	.5258475+	.0465789-
.9016917+	2.296185+	10.0	1.049	
2670.100+	.0000000+	.0300000+	.002326	2053.0
2.781266+	.1996087+	.0035440-	13.93356+	288.3996+
1.080209+	93.19029+	3.094738+	2.574746+	.0023460+
22.55683+	15.26189+	1.337012+	.5192792+	.0012742-
.9257460+	2.574746+	10.0	1.048	
2671.100+	2.500000+	.0300000+	.002326	2053.0
2.617662+	.2994131+	.0456795+	8.742642+	288.3996+
1.084647+	93.19029+	3.094738+	2.413376+	.0023460+
22.64949+	15.32458+	1.255605+	.5203025+	.0174505+
.9219586+	2.413376+	10.0	1.048	
2672.100+	2.500000+	.0300000+	.002321	2053.0
1.944278+	.2774223+	.0353420+	7.008368+	288.6767+
.7271773+	114.2492+	2.526728+	2.673733+	.0023415+
22.79915+	15.41103+	1.125696+	.4210206+	.0181774+
1.375180+	2.673733+	15.0	1.048	
2673.100+	.0000000+	.0300000+	.002316	2053.0
2.029636+	.2278021+	.0255249+	8.909648+	288.6767+
.7204090+	114.3601+	2.524278+	2.817339+	.0023415+
22.58695+	15.26759+	1.179740+	.4187428+	.0125760+
1.388100+	2.817339+	15.0	1.048	
2674.100+	2.500000-	.0300000+	.002316	2053.0
1.844693+	.1635213+	.0101528-	11.28105+	288.9537+
.7338029+	114.3601+	2.526699+	2.513880+	.0023370+
23.02895+	15.55145+	1.063957+	.4232331+	.0055038-
1.362763+	2.513880+	15.0	1.048	
2675.100+	2.500000-	.0300000+	.002309	2053.0
1.522227+	.1843843+	.0395810-	8.255729+	291.1936+
.5610191+	132.3119+	2.200612+	2.713325+	.0023370+
23.2947+	15.85287+	.9751498+	.3593928+	.0260020-
1.782470+	2.713325+	20.0	1.049	

G.E.M.
FORCE

2676.100+	.0000000+	.0300000+	.002307	2053.0
1.678718+	.2342865+	.0167642+	7.165234+	291.1936+
.5462976+	132.4395+	2.198690+	3.072900+	.0023370+
22.68345+	15.43688+	1.085637+	.3532939+	.0099863+
1.830504+	3.072900+	20.0	1.049	
2677.100+	2.500000+	.0300000+	.002307	2053.0
1.625369+	.2681185+	.0422394+	6.062127+	291.1936+
.5491779+	132.4395+	2.198690+	2.959640+	.0023370+
22.80305+	15.51827+	1.049181+	.3544963+	.0259876+
1.820903+	2.959640+	20.0	1.049	
2678.100+	2.500000+	.0300000+	.002296	2053.0
1.304089+	.2684005+	.0511270+	4.858742+	288.9537+
.3567391+	162.6756+	1.776257+	3.655581+	.0023370+
22.39111+	15.12071+	.9611936+	.2629386+	.0392052+
2.803168+	3.655581+	30.0	1.048	
2679.100+	.000000+	.0300000+	.002286	2053.0
1.325428+	.2497929+	.0140831+	5.306109+	289.2303+
.3636501+	162.9869+	1.774561+	3.644790+	.0023325+
22.84673+	15.41364+	.9719711+	.2666740+	.0106253+
2.749895+	3.644790+	30.0	1.048	
2680.100+	2.500000-	.0300000+	.002282	2053.0
1.187906+	.2215995+	.0227780-	5.360599+	289.2303+
.3710672+	163.1423+	1.772870+	3.201324+	.0023325+
23.31272+	15.72802+	.8664101+	.2706411+	.0191749-
2.694929+	3.201324+	30.0	1.048	
2681.100+	2.500000-	.0300000+	.002272	2053.0
1.026080+	.2440132+	.0046756-	4.205020+	289.2303+
.2806845+	188.7488+	1.532355+	3.655638+	.0023310+
23.52835+	15.86275+	.8011972+	.2191675+	.0045567-
3.562718+	3.655638+	40.0	1.048	
2682.100+	.0000000+	.0300000+	.002259	2053.0
1.193241+	.2710788+	.0290897+	4.401823+	289.23067+
.2674300+	189.2853+	1.529472+	4.461882+	.0023273+
22.43113+	15.11368+	.9414653+	.2110018+	.0243787+
3.739295+	4.461882+	40.0	1.048	
2683.100+	2.500000+	.0300000+	.002259	2053.0
1.267930+	.2909551+	.0699275+	4.337819+	289.2303+
.2552544+	189.4638+	1.526573+	4.267310+	.0023273+
21.38220+	14.42558+	1.010098+	.2033487+	.0045567+
3.917659+	4.967319+	40.0	1.048	

G.E.M.
FORCE

2684.100+	.0000000+	.0100000+	.002316	2053.0
.3841134+	.2537329+	.0040604-	1.513807+	.0001113+
.0000000+	93.37946+	.0000011+	0000000+	.023218+
.0000000+	.0000000+	.3841134+	.0000000+	.0105917-
0000000+	0000000+	10.0	1.000	

2685.100+	.0000000+	.0100000+	.002314	2053.0
.3746232+	.2638895+	.0068755+	1.419643+	.0001114+
.0000000+	114.4807+	.0000009+	0000000+	.0023173+
.0000000+	.0000000+	.3746292+	.0000000+	.0183529+
0000000+	0000000+	15.0	1.000	

2686.100+	.0000000+	.0100000+	.002307	2053.0
.3912267+	.2520483+	2.1927.7-	1.552188+	.0001116+
.0000000+	132.4436+	.0000.08+	0000000+	.0023084+
.0000000+	.0000000+	.3912267+	.0000000+	5.604799-
0000000+	0.00000+	20.0	1.000	

2687.100+	.0000000+	.0100000+	.002286	2053.0
.3983399+	.2571231+	.0108895-	1.549216+	.001122+
.0000000+	163.0037+	.0000.06+	0000000+	.0022863+
.0000000+	.0000000+	.3983399+	.0000000+	.0273372-
0000000+	0000000+	30.0	1.000	

2688.100+	.0000000+	.0100000+	.002267	2053.0
.4054531+	.2579689+	.0213054-	1.571712+	.001126+
.0000000+	188.9571+	.0000005+	0000000+	.022690+
.0000000+	.0000000+	.4054531+	.0000.00+	.525498-
0000000+	0000000+	40.0	1.000	

2690.100+	.0000.00+	.0100000+	.002302	2048.1
5.783041+	.1607019+	.1094720+	35.93612+	289.2346+
.8074169+	93.75718+	3.084932+	7.162398+	.0023752+
16.60513+	11.40770+	3.199617+	.4467242+	.0189298+
1.238517+	7.162398+	10.0	1.049	

2691.100+	.0000000+	.0100000+	.002297	2048.1
4.021336+	.1950978+	.738821+	20.61189+	288.9536+
.5377551+	114.9431+	2.513882+	7.478006+	.023790+
16.57848+	11.39661+	2.615069+	.3497.13+	.183742+
1.853582+	7.478006+	15.0	1.049	

2692.100+	.0000000+	.1000000+	.002290	2048.1
3.23500+	.202000+	.068600+	15.91137+	289.2346+
.4037084+	132.9845+	2.174949+	7.867185+	.023744+
16.61073+	11.4777+	2.262613+	.2876013+	.226518+
2.477034+	7.867185+	20.0	1.049	

G.E.M.
FORCE

2693.100+	.000000+	.0100000+	.002267	2048.1
2.304600+	.2193079+	.483807+	10.43020+	289.2346+
.2691300+	163.6507+	1.767302+	8.563162+	.0023736+
16.61634+	11.40770+	1.815940+	.2120642+	.0210791+
3.715552+	8.563162+	30.0	1.049	
2694.100+	.0000000+	.0100000+	.002253	2048.1
1.865440+	.2253285+	.0379551+	8.260424+	289.2346+
.2013542+	189.5238+	1.526112+	9.24152+	.0023728+
16.62195+	11.40770+	1.552135+	.1673523+	.0203464+
4.954069+	9.241520+	40.0	1.049	
2695.100+	.0000000+	.0100000+	.002280	2048.1
1.44500+	.258500+	.146000+	5.564853+	135.1672+
.1114157+	108.7892+	1.242469+	12.73635+	.022737+
6.82920+	2.098870+	1.276827+	.1002467+	.1012575+
8.97539+	12.73685+	13.33	1.010	
2696.100+	.0000000+	.0100000+	.002280	2048.1
1.24000+	.261000+	.131000+	4.708993+	128.4088+
.6758051+	124.6358+	1.030272+	16.03245+	.0022737+
6.419448+	1.874291+	1.129705+	.704636+	.999135+
13.19171+	16.03245+	17.50	1.009	
2697.100+	.0000000+	.0100000+	.002276	2048.1
1.14800+	.268000+	.112000+	4.255683+	128.4088+
.0624277+	137.4777+	.9340338+	18.01640+	.022737+
6.419448+	1.874291+	1.058636+	.587595+	.921539+
16.01850+	18.01640+	21.25	1.009	
2698.100+	.0000000+	.0300000+	.002290	2048.1
1.12000+	.3044879+	.087400+	3.521705+	134.5257+
.1508002+	1.8.5757+	1.239003+	7.110557+	.0022923+
9.212428+	2.840916+	.9317961+	.1310440+	.0798422+
6.631023+	7.110557+	13.33	1.010	
2699.100+	.0000000+	.0300000+	.002285	2048.1
1.008043+	.3109874+	.0874258+	3.160136+	134.5257+
.1115206+	124.5147+	1.80400+	9.039001+	.0022931+
8.933397+	2.75733+	.9069052+	.103315+	.0867282+
8.966952+	9.03981+	17.50	1.010	
270.100+	.0000000+	.0300000+	.002276	2048.1
.9707443+	.3168267+	.0729770+	3.063939+	134.5257+
.0918405+	137.4754+	.9785440+	1.56989+	.0022931+
8.938397+	2.75733+	.8890830+	.0841153+	.0751764+
10.88844+	1.56989+	21.25	1.010	

G.E.M.
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2701.100+	.0000000+	.0500000+	.002291	2048.1
.9383410+	.323.184+	.0500944+	2.702288+	134.2682+
.1704391+	102.5757+	1.236631+	5.500970+	.0023003+
10.39540+	3.21763+	.802215+	.1454198+	.0542059+
5.867197+	5.508970+	13.33	1.010	

2702.10 +	.0000000+	.0500000+	.002281	2048.1
.8733089+	.3223539+	.0400249+	2.701824+	134.3970+
.1299829+	124.6315+	1.072374+	6.723759+	.0022160+
10.79065+	3.213843+	.7733824+	.1150308+	.0458022+
7.693317+	6.723259+	17.50	1.010	

2703.100+	.0000000+	.0500000+	.002281	2048.1
.8234589+	.3184187+	.0284951+	2.586087+	134.3970+
.1070447+	137.3444+	.9787404+	7.692659+	.0022951+
10.41894+	3.213843+	.7438353+	.0965941+	.0345042+
9.341885+	7.692659+	21.25	1.010	

2704.100+	.0000000+	.1000000+	.002293	2048.1
.7302826+	.2994131+	.0462210-	2.441050+	134.0103+
.1855763+	102.4717+	1.235439+	3.938446+	.0023068+
11.30859+	3.495921+	.6164787+	.1565283+	.0500041-
5.388617+	3.938446+	13.33	1.010	

2705.100+	.0000000+	.1000000+	.002286	2048.1
.6544155+	.3006714+	.0720574-	2.17575+	134.0103+
.1444412+	124.5125+	1.076279+	4.468793+	.0023068+
11.71247+	3.620775+	.5708234+	.1277354+	.1101096-
6.828578+	4.468793+	17.50	1.010	

2706.100+	.0000000+	.1000000+	.002276	2048.1
.6152305+	.2287176+	.0670585-	2.063263+	134.1393+
.1234898+	137.4754+	.9757334+	4.987621+	.0023015+
12.00894+	3.707578+	95482208+	.1099162+	.1088752-
8.097833+	4.987621+	21.25	1.010	

2707.100+	.0000000+	.1500000+	.002291	2043.9
.6022447+	.2268757+	.0035734-	2.030629+	134.0103+
.1899948+	102.5757+	1.234255+	3.172953+	.0023020+
11.60184+	3.579157+	.5065944+	.1594602+	.0059375-
5.263300+	3.172953+	13.33	1.010	

2708.100+	.0000000+	.1500000+	.002286	2043.9
.5444628+	.2203551+	.0009710-	1.872002+	134.1393+
.1439519+	124.5125+	1.077315+	3.632289+	.0022968+
12.03384+	3.707578+	.4736448+	.1303984+	.0385115-
6.668803+	3.632289+	17.50	1.010	

G.E.M.
FORCE

2709.100+	.0000000+	.1500000+	.002276	2043.9
.5088039+	.2897611+	.0276923-	1.755912+	137.4323+
.1199516+	137.4754+	.9269468+	4.241712+	.0022960+
12.30852+	3.501350+	.4543088+	.1071012+	.544263-
8.336623+	4.241712+	21.25	1.009	

TABULATED FORCE AND MOMENT DATA
FOR A SERIES OF CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODELS
STATIC TESTS

By

Claude A. Foltz

Engineering Report 352-7

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February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

DATA PRESENTATION

The tabulated values on the following pages represent the static force and moment results. Enclosed are two sets of tabulated data, both concerning static tests but differing to the following extent.

The first set, entitled, "G.E.M. Force-Static", presents lift, drag, and moment values along with other mass flow parameters. The second set of tabulated data entitled, "G.E.M. Static Force Tests - Slanted Ground Board", presents results from an attempt to evaluate the static drag and pitching moments by use of a tilted ground board. This data was corrected by taking tare values of drag and pitching moment with the ground board at a great height so that there would be no cushion effect. The values tabulated for drag and pitching moment then represent the measured differences between the heights noted and, essentially, infinity.

NOMENCLATURE

Sequence of readouts on data sheet:

- | | |
|--------------|--|
| 1. | Run number, slot width, and convergence angle |
| 2. α | Angle of attack |
| 3. h/d | Height to diameter ratio |
| 4. \dot{w} | Mass flow (lbs/sec) |
| 5. Q | Volume flow (ft ³ /sec) |
| 6. L | Lift (lbs) |
| 7. D | Drag (lbs) |
| 8. M | Pitching Moment (ft.lbs) |
| 9. P_M/P_O | Pressure ratio |
| 10. B.P. | Barometric pressure (lb/ft ²) |
| 11. ρ | Density in test section (slugs/ft ³) |

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF ONE PER CENT
 AND A JET CONVERGENCE ANGLE OF 0°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP	ρ
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February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE STATIC

25.01000	2.5+	.50	4770	7.1500	1.910000+	.071800+	.164000+	1.009	2010.6	.002034
26.01000	0 +	.50	.4770	7.2816	1.909500-	.023900-	.343000+	1.009	2010.6	.002034
27.01000	2.5-	.50	.4770	7.3443	1.708500+	.095700-	.208000+	1.009	2010.6	.002034
28.01000	2.5--	.50	.9550	14.137	11.75850 +	.023900-	.419000+	1.047	2010.6	.002140
29.01000	0. +	.50	.9560	14.139	13.46700 +	.191200+	1.34000+	1.047	2010.6	.002140
30.01000	2.5+	.50	.9560	14.139	12.26100+	.526000+	1.80300+	1.047	2010.6	.002140
31.01000	2.5+	.50	2.281	29.280	40.70250+	2.15000+	8.26100+	1.299	2010.6	.002430
32.01000	0. +	.50	2.281	29.517	51.65700+	.143300+	6.28900+	1.299	2010.6	.002430
33.01000	2.5-	.50	2.281	29.517	41.00400+	.270000-	.054000+	1.299	2010.6	.002430
52.01000	2.5+	.40	1.857	25.380	42.61200+	2.15000+	5.55000+	1.177	2005.7	.002272
53.01000A	0. +	.40	1.886	25.106	51.55650+	.549000-	.262000+	1.180	2010.6	.002332
54.01000A	2.5-	.40	1.691	25.243	50.55150+	2.56000-	35.8000-	1.180	2010.6	.002332
55.01000A	2.5-	.40	.9760	13.853	13.26600+	.621000-	.171000+	1.048	2010.6	.002191
56.01000	0. +	.40	.9780	13.831	13.56750+	.071800-	.660000+	1.049	2010.6	.002191
57.01000	2.5+	.40	.9770	13.822	11.75850+	.454000+	1.34200+	1.048	2010.6	.002191

C.E.M.
FORCE STATIC

58.01000	2.5+	.40	.4530	6.6723	.0502500-	.023900+	.760000+	1.008	2010.6	.002108
59.01000	0. +	.40	.4530	6.6723	.9547500+	.023900-	.494000+	1.008	2010.6	.002108
60.01000	2.5-	.40	4540	6.6631	1.500000+	.095500+	1.50500+	1.008	2010.6	.002108
85.01000	2.5-	.35	1.875	25.450	51.10000+	2.10000-	2.12000-	1.180	2007.3	.002224
86.01000	0. +	.35	1.831	25.450	51.80000+	.382000+	4.33000+	1.180	2007.3	.002224
87.01000A	2.5+	.35	1.904	25.630	49.24500+	1.29000+	2.46000+	1.180	2008.5	.002267
88.01000	2.5-	.35	.4680	10.906	1.095450+	.191000-	6.48000-	1.010	2008.5	.002089
89.01000	0. +	.35	.4780	10.910	2.311500+	.071800--	6.20000-	1.009	2008.5	.002089
90.01000	2.5+	.35	.4170	9.0243	.5427000+	.095600+	2.79000-	1.006	2008.5	.002089
91.01000	2.5-	.35	.9770	22.990	13.46799+	.454000+	32.8000-	1.050	2008.5	.002395
92.01000	0. +	.35	.9810	22.844	15.37650+	.095600-	32.7000-	1.050	2008.5	.002395
93.01000	2.5-	.35	.9820	22.851	14.77350+	.741000-	33.6000-	1.050	2008.5	.002395
112.0100	2.5+	.30	.4810	7.1709	1.206000+	.071800+	.237000+	1.011	2009.9	.002083
113.0100A	0. +	.30	.4800	7.1963-	2.412000+	.119500-	.379000-	1.010	2009.9	.002083

G.E.M,
FORCE STATIC

114.0100A	2.5-	.30	.4810	7.1734	2.211000+	.119500-	.052000-	1.010	2009.9	.002083
115 0100	2.5-	.30	.9850	14.192	14.07000+	.956000-	1.54800-	1.050	2009.9	.002175
116.0100	0. +	.30	.9900	14.133	15.17550+	.191000-	5.05000+	1.050	2009.9	.002175
117.0100	2.5+	.30	.9900	14.133	13.16550+	.454000+	6.06000+	1.050	2009.9	.002175
118.0100	2.5+	.30	1.885	25.303	49.14450+	1.60000+	2.09500+	1.182	2009.9	.002313
119.0100	0. +	.30	1.880	25.417	53.16450+	.573000-	.389000-	1.182	2009.9	.002299
120.0100A	2.5-	.30	1.872	25.324	51.15450+	2.46000-	3.70000-	1.182	2009.9	.002299
128.0100	2.5-	.25	.4740	7.3707	2.110500+	.047800-	.660000-	1.010	2006.4	.002023
129.0100	0. +	.25	.4740	7.2734	2.713500+	.047800+	.745000-	1.010	2006.4	.002023
130.0100	2.5+	.25	.4740	7.2734	2.713500+	.167200+	.576000-	1.010	2006.4	.002023
131.0100+	2.5+	.25	.9710	14.365	12.96450+	.670000+	.532000+	1.049	2006.4	.002099
132.0100	0. +	.25	.9710	14.365	13.96950+	.144000+	.330000+	1.050	2006.4	.002099
133.0100A	2.5-	.25	.9750	14.325	13.86900+	.047800-	.224000-	1.049	2006.4	.002099
152.0100	2.5+	.25	1.853	25.688	45.22500+	1.98500+	4.25000+	1.183	2006.4	.002238

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FORCE STATIC

153.0100	0. +	.25	1.865	25.916	50.14950+	.215000-	1.14200+	1.183	2006.4	.002238
154.0100	2.5-	.25	1.847	25.616	49.24500+	2.10000-	.169800-	1.183	2006.4	.002238
166.0100	5.0+	.15	.4470	6.7650	.3015000+	.095600+	.900000+	1.008	2009.2	.002052
167.0100	2.5+	.15	.4470	6.7744	2.010000+	.071800+	.496000+	1.008	2009.2	.002052
168.0100	0. +	.15	.4470	6.7603	2.110500+	.023900-	.428000+	1.009	2009.2	.002052
169.0100	2.5-	.15	.4480	6.7636	1.909500+	.119500-	.685000+	1.009	2009.2	.002052
170.0100	5.0-	.15	.4470	6.7603	2.010000+	.239000-	.188000+	1.008	2009.2	.002052
171.0100	5.0-	.15	.9810	14.229	14.17050+	.980000-	.737000-	1.049	2009.2	.002147
172.0100	2.5-	.15	.9810	14.229	14.87400+	.693000-	.474000+	1.049	2009.2	.002147
173.0100	0. +	.15	.9820	14.198	15.67800+	.023900-	.234000+	1.049	2009.2	.002147
174.0100	2.5+	.15	.9820	14.198	16.18050+	.476000+	.528000+	1.049	2009.2	.002147
175.0100	5.0+	.15	.9820	14.198	13.86900+	.980000+	1.59900+	1.049	2009.2	.002147
186.0100A	5.0-	.15	1.827	25.783	48.94350+	4.25000-	4.48000-	1.182	2003.6	.002201
187.0100A	2.5-	.15	1.825	25.639	52.26000+	2.51000-	.076200+	1.181	2003.6	.002201

G.E.M
FORCE STATIC

188.0100B	0. +	.15	1.822	25.681	53.76750+	.263000-	.756000+	1.181	2003.6	.002201
189.0100B	2.5+	.15	1.825	25.639	49.24500+	2.17500+	3.95000+	1.181	2003.6	.002201
190.0100A	5.0+	.15	1.827	25.767	44.72250+	3.90000+	6.87000+	1.181	2021.9	.002201
211.0100	5.0+	.10	1.919	25.235	61.20450+	4.21000+	3.81000+	1.187	2021.9	.002365
212.0100	2.5+	.10	1.923	25.242	68.13900+	2.77000+	1.95000+	1.189	2021.9	.002365
213.0100	0. +	.10	1.920	25.172	77.28450+	.837000-	1.18300-	1.189	2021.9	.002365
214.0100	2.5-	.10	1.923	25.242	72.25950+	3.80000-	3.60000-	1.189	2021.9	.002365
215.0100	5.0-	.10	1.920	25.261	64.82250+	6.00000-	6.07000-	1.187	2021.9	.002365
216.0100	5.0-	.10	1.357	14.000	22.61250+	1.67200-	26.1000+	1.048	2021.9	.002231
217.0100	2.5-	.10	1.361	13.980	24.72300+	1.10000-	26.8500+	1.048	2021.9	.002231
218.0100	0. +	.10	1.361	13.980	26.63250+	.334000-	27.6000+	1.048	2021.9	.002231
219.0100	2.5+	.10	1.357	14.020	24.82350+	.287000+	28.2000+	1.048	2021.9	.002231
220.0100	5.0+	.10	1.357	14.050	24.62250+	.885000+	28.4000+	1.048	2021.9	.002231
221.0100	5.0+	.10	.4610	6.6174	3.618000+	.718000+	1.42800+	1.009	2021.9	.002163

G.E.M.
FORCE STATIC

222.0100	2.5+	.10	.4610	6.6174	2.713500+	.000000+	2.34000-	1.009	2021.9	.002153
223.0100	0. +	.10	.4610	6.6174	2.311500+	.167000-	1.32000+	1.009	2021.9	.002163
224.0100	2.5-	10	.4610	6.6174	2.110500+	.239000-	1.09600+	1.009	2021.9	.002153
225.0100	5.0-	.10	.4610	6.6174	2.211000+	.334000-	.779000+	1.009	2021.9	.002153
243.0100	2.5+	.05	.4250	6.2226	2.713500+	.311000+	.189000+	1.007	2020.5	.002118
244.0100	0. +	.05	.4250	6.2294	3.819000+	.023900+	.168000-	1.007	2020.5	.002118
245.0100	2.5-	.05	.4250	6.2316	4.120500+	.215000-	.256000-	1.007	2020.5	.002118
246.0100+	2.5-	.05	1.056	14.810	28.74300+	3.34000-	3.29000-	1.057	2020.5	.002226
247.0100	0. +	.05	1.061	14.725	41.00400+	.119500-	.395000+	1.060	2020.5	.002226
248.0100	2.5+	.05	1.061	14.725	33.76800+	1.50500+	2.45500+	1.059	2020.5	.002226
249.0100	2.5-	.05	1.892	24.712	118.6905+	5.81000-	5.23000-	1.190	2021.2	.002371
250.0100	0. +	.05	1.884	24.641	136.1775+	.932000-	.057300-	1.192	2020.5	.002371

G.E.M.
FORCE STATIC

251.0100	2	5+	.05	1.907	25.000	115.6755+	3.76000+	4.11000+	1.192	2021.2	.002371
285.0100	2	5+	.03	.4250	6.2316	2.412000+	.000000+	.869000-	1.007	2021.2	.002118
286.0100	0.	+	.03	.4250	6.2272	7.437000+	.311000-	.768000-	1.007	2021.2	.002118
287.0100	2	5-	.03	.4250	6.2316	5.226000+	.478000-	.925000-	1.007	2021.2	.002118
288.0100	2	5-	.03	.9890	13.772	43.51650+	1.93500-	3.15000-	1.049	2021.2	.002228
289.0100	0.	+	.03	.8840	12.306	48.94350+	.406000-	.572000+	1.048	2021.2	.002228
290.0100	2	5+	.03	.9040	12.618	33.96900+	1.43400+	1.76000+	1.046	2021.2	.002228
303.0100	2	5+	.03	1.892	24.675	163.8150+	6.67000+	11.5800+	1.200	2021.2	.002379
304.0100	0.	+	.03	1.860	24.128	212.3565+	.143400-	3.26000+	1.207	2021.2	.002379
305.0100	2	5-	.03	1.887	24.630	177.5835+	9.35000-	6.46000-	1.201	2021.2	.002379
310.0100	0.	+	.01	.3950	5.8106	13.46700+	.287000-	.075700-	1.009	2021.2	.002111
311.0100	0.	+	.01	.7440	10.688	81.30450+	.478000-	1.78300+	1.049	2021.2	002384
316 0100	0.	+	.01	1.776	22.598	393.9600+	1.67300-	4.67000+	1.226	2021.2	.002440

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF ONE PER CENT
 AND A JET CONVERGENCE ANGLE OF 30°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_O	BP	ρ
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February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE . . . STATIC

321.0130A	0. +	.01	.3620	5.3988	14.97450+	.124500+	.910000-	1.009	2014.2	.002082
322.0130A	0 +	.01	.5970	6.4592	90.75150+	.373000-	2.10500+	1.050	2014.2	.002384
327.0130A	0. +	.01	1.583	20.063	421.4970+	1.07400-	11.0100+	1.249	2014.2	.002450
334.0130	2.5+	.03	.3850	5.8332	4.522500-	.416000+	.455000-	1.007	2014.9	.002074
335.0130	0. -	.03	.3840	5.8347	7.336500+	.049000+	.911000-	1.007	2014.9	.002074
336.0130	2.5-	.03	.3840	5.8388	6.331500+	.171500-	.994000-	1.007	2014.9	.002074
337.0130	2.5-	.03	.7590	10.787	46.43100-	3.14000-	1.87400-	1.046	2014.9	.002186
338.0130	0. +	.03	.7330	10.410	53.46600-	.223500-	1.52800+	1.047	2014.9	.002186
339.0130	2.5+	.03	.7580	10.764	42.81300+	1.86500+	2.99500+	1.046	2014.9	.002186
352.0130	2.5-	.03	1.698	21.948	227.6325+	10.6800-	6.81000-	1.227	2014.9	.002402
353.0130	0. +	.03	1.667	21.535	251.1495+	1.70000-	.220500+	1.226	2014.9	.002402
354.0130	2.5+	.03	1.712	22.122	213.0600+	9.20000+	11.7800+	1.227	2014.9	.002402
367.0130	2.5-	.05	.3920	5.8091	14.07000+	.174200-	.000000-	1.008	2014.9	.002097
368.0130	0. +	.05	.4830	7.1477	7.839000+	.024900+	1.42500-	1.009	2014.9	.002097

G.E.M.
FORCE STATIC

369.0130	2.5+	.05	.4830	7.1502	7.135500+	.22400+	2.83000+	1.009	2014.9	.002097
370.0130	2.5+	.05	.8600	12.075	38.79300+	1.6700+	2.12500+	1.055	2014.9	.002219
371.0130	0. -	.05	.8620	12.052	45.22500+	.22950-	.306000+	1.056	2014.9	.002219
372.0130	2.5-	.05	.5360	11.970	40.70000+	1.6400-	1.32000-	1.055	2014.9	.002219
385.0130	2.5-	.05	1.679	21.624	161.0010+	7.7600-	4.60000-	1.224	2013.5	.002400
386.0130	0. +	.05	1.667	21.482	178.4880+	.84500-	.293000+	1.224	2013.5	.002400
387.0130	2.5+	.05	1.676	21.623	154.8705-	6.6500+	9.10000+	1.222	2013.5	.002400
418.0130	5.0+	.10	1.866	22.024	81.20400+	7.2100+	7.37000+	1.222	2016.3	.002378
419.0130	2.5+	.10	1.722	22.040	89.50000+	4.1600+	4.26700+	1.223	2016.3	.002378
420.0130	0. +	.10	1.687	22.043	102.4095+	.12400-	1.30500+	1.224	2016.3	.002378
421.0130	2.5-	.10	1.687	22.085	92.86200+	4.2300-	2.55000-	1.223	2016.3	.002378
422.0130	5.0-	.10	1.686	22.098	83.61600+	7.4200-	6.85000-	1.223	2016.3	.002378
423.0130	5.0-	.10	.8100	11.492	17.68800+	1.2700-	.442500-	1.048	2016.3	.002188
424.0130	2.5-	.10	.8090	11.499	20.30100+	.74600-	.791000+	1.049	2016.3	.002188
425.0130	0. +	.10	.8090	11.499	22.73000+	.02420-	.164000-	1.049	2016.3	.002188

**G.E.M.
FORCE STATIC**

426.0130	2.5+	.10	.8090	11.499	19.29600+	.89500+	1.0210+	1.049	2016.3	.002188
427.0130	5.0+	.10	.8290	11.745	18.39150+	1.4920+	2.0050+	1.048	2016.3	.002188
428.0130	5.0+	.10	.4200	6.3100	3.718500+	.47300+	.02100-	1.009	2016.3	.002073
429.0130	2.5+	10	.4210	6.3030	3.316500+	.34800+	.29800+	1.010	2016.3	.002073
430.0130	0. +	.10	.4210	6.3052	3.819000+	.22400+	.14100+	1.009	2016.3	.002073
431.0130	2.5-	.10	4210	6.3052	3.517500+	.02490+	.09080-	1.009	2016.3	.002073
432.0130	5.0-	10	.4210	6.3052	2.613000+	.12430-	.54100-	1.009	2016.3	.002073
433.0130	5.0+	.15	.3860	5.7904	.6030000-	.27000+	.58500+	1.007	2012.7	.002057
434.0130	2.5+	.15	.3830	5.8606	.3015000-	.24500+	.15400-	1.007	2012.7	.002057
435.0130	0. +	.15	.3820	5.8557	.3015000+	.02450+	.38100-	1.007	2012.7	.002057
436.0130	2.5-	.15	.3830	5.8606	1.005000+	.02450-	.48600-	1.007	2012.7	.002057
437.0130	5.0-	.15	.3820	5.8557	1.105500+	.07350-	1.0070-	1.006	2012.7	.002057
448.0130	5.0-	.15	.8280	11.756	15.27600+	.82000-	.47600+	1.050	2012.7	.002188
449.0130	2.5-	.15	.8280	11.752	16.28100+	.43400-	1.1000+	1.050	2012.7	.002188

G. E. M.
FORCE STATIC

450.0130	0. +	.15	.8280	11.752	16.48200+	.02490-	1.4850+	1.051	2012.7	.002188
451.0130	2.5+	.15	.8530	12.102	16.78350+	.74600+	1.6200+	1.050	2012.7	.002188
452.0130	5.0+	.15	.8530	12.106	15.17550+	1.3690+	2.9400+	1.050	2012.7	.002188
463.0130	5.0-	.15	1.681	22.012	64.52100+	5.9000-	7.0700-	1.219	2012.7	.002367
464.0130	2.5-	.15	1.681	22.047	70.24950+	3.2400-	3.1200-	1.222	2012.7	.002367
465.0130	0. +	.15	1.681	22.041	72.25950+	.99500-	.26800+	1.222	2012.7	.002367
466.0130	2.5+	.15	1.680	22.065	68.13900+	3.2850+	3.4000+	1.222	2012.7	.002367
467.0130	5.0+	.15	1.679	22.065	63.41550+	5.9000+	6.4800+	1.221	2012.7	.002367
484.0130	2.5+	.25	.4240	6.2323	.9045000+	.22400+	.42400+	1.009	2015.6	.002110
485.0130	0. +	.25	.4240	6.2369	1.005000+	.02490-	.16600-	1.010	2015.6	.002110
486.0130	2.5-	.25	.4240	6.2502	1.708500+	.00000+	.55000-	1.010	2015.6	.002110
493.0130	2.5-	.25	.8350	11.741	13.76850+	1.1360-	1.5100-	1.049	2015.6	.002208
494.0130	0. +	.25	.8350	11.741	15.27600+	.24800-	.67000-	1.049	2015.6	.002208
495.0130	2.5+	.25	.8350	11.741	14.47200+	.32400+	.46000+	1.049	2015.6	.002208

G. E. M.
FORCE STATIC

508.0130	2.5-	.25	1.693	21.899	58.34025+	2.5100+	2.0450+	1.219	2015.6	.002398
509.0130	0. +	.25	1.692	21.911	61.15425+	.04980-	.21800-	1.221	2015.6	.002398
510.0130	2.5-	.25	1.692	21.911	59.34525+	2.6900-	3.6660-	1.221	2015.6	.002398
511.0130	2.5+	.30	4.230	9.2509	1.407000+	.17400+	.43200-	1.010	2014.2	.002100
512.0130	0. +	.30	4.230	9.2509	.70350000+	.19990+	.01630-	1.010	2014.2	.002100
513.0130	2.5-	.30	4.230	9.2509	1.809000+	.04170-	.01400-	1.009	2014.2	.002100
526.0130	2.5+	.30	.7780	13.919	12.47000+	.86500+	1.3200+	1.041	2014.9	.002212
527.0130	0. +	.30	.8130	11.419	13.48000+	.14900+	.40500-	1.041	2014.9	.002212
528.0130	2.5-	.30	8130	11.410	12.96450+	.47300-	.45300-	1.041	2014.9	.002212
529.0130	2.5-	.30	1.695	21.899	59.89800+	2.6200-	4.9800-	1.198	2014.9	.002403
530.0130	0. +	.30	1.695	21.899	63.11400+	.00000+	1.5410-	1.198	2014.9	.002403
531.0130	2.5+	.30	1.695	21.899	56.78250+	2.6850+	3.3000+	1.198	2014.9	.002403
550 0130	2.5-	.35	.4210	6.3118	2.010000+	.46300+	.77600+	1.010	2017.0	.002071

G.E.M.
FORCE STATIC

551.0130	0. +	.35	4200	5.3078	2.211000+	.49800+	.63200+	1.010	2017.0	.002071
552.0130	2.5+	.35	4200	6.3078	1.407000+	.54700+	.97300+	1.010	2017.0	.002071
553.0130	2.5+	.35	.8230	11.840	11.15550+	.87000+	2.8450+	1.049	2017.0	.002158
554.0130	0. +	.35	.3230	11.840	13.06500+	.29500+	1.7400+	1.049	2017.0	.002158
555.0130	2.5-	.35	.8230	11.840	13.06500+	.14900-	1.7600-	1.049	2017.0	.002158
568.0130	2.5+	.35	1.655	22.022	51.45600+	2.7600+	5.4100+	1.216	2014.9	002334
569.0130	0. +	.35	1.656	22.029	57.38550+	.24900+	1.4270+	1.216	2014.9	.002334
570.0130	2.5-	.35	1.656	22.029	56.07900+	2.2400-	2.8150-	1.215	2014.9	.002334
571.0130	2.5+	.40	.4840	7.1859	2.211000+	.12440-	.36000+	1.015	2017.7	.002091
572.0130	0. +	.40	.4840	7.1859	2.914500+	.17400-	.33600+	1.015	2017.7	.002091
573.0130	2.5-	.40	.4840	7.1859	2.914500+	.22400-	.19300-	1.015	2017.7	.002091
586.0130	2.5-	.40	.8280	11.796	12.46200+	.42300-	.67300-	1.052	2017.7	.002179
587.0130	0. +	.40	.8280	11.792	14.97450+	.09950+	.47500+	1.052	2017.7	.002179

G.E.M.
FORCE STATIC

588.0130	2.5+	.40	.8280	11.796	11.65800+	.67100+	1.8950+	1.052	2017.7	.002179
589.0130	2.5+	.40	1.582	22.065	48.24000+	2.4500+	4.4800+	1.221	2017.7	.002360
590.0130	0. +	.40	1.680	22.094	58.18950+	.17400+	.72000+	1.222	2017.7	.002350
591.0130	2.5-	.40	1.679	22.124	51.75750+	2.0850-	4.5300-	1.222	2017.7	.002350
610.0130	2.5+	.50	.4220	6.2738	1.005000-	.04980+	.76000+	1.009	2018.4	.002085
611.0130	0. +	.50	.4220	6.2848	.7035000-	.12480-	.47900+	1.009	2018.4	.002085
612.0130	2.5-	.50	.4220	6.2870	.6030000+	.07460-	.53800-	1.008	2018.4	.002085
613.0130	2.5-	.50	.8300	11.756	6.884250+	.19900-	.52400-	1.049	2018.4	.002192
614.0130	0. +	.50	.8290	11.746	6.984750+	.04980-	1.3990+	1.049	2018.4	.002192
615.0130	2.5+	.50	.8290	11.754	5.376750+	.32400+	2.2900+	1.049	2018.4	.002192
628.0130	2.5+	.50	1.683	22.023	28.64250+	1.0950+	3.2900+	1.219	2018.4	.002372
629.0130	0. +	.50	1.697	22.211	27.73800+	.02480+	.79400+	1.221	2018.4	.002372
630.0130	2.5-	.50	1.697	22.205	24.92400+	1.1430-	5.3400-	1.221	2018.4	.002372

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF ONE PER CENT
AND A JET CONVERGENCE ANGLE OF 60°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP	f
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February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M.
FORCE STATIC

655.0160	2.5+	.50	1.630	21.654	3.216000+	1.0200+	.51530-	1.291	2026.2	.002338
656.0160	0 +	.50	1.630	21.647	2.814000+	.14900+	.44120-	1.300	2026.2	.002338
657.0160	2.5-	.50	1.630	21.647	4.522500+	.74700-	1.1109-	1.300	2026.2	.002338
658.0160	2.5+	.50	.7200	10.534	.8040000+	.02490+	.47820-	1.048	2028.3	.002118
659.0160	0 +	.50	.7100	10.405	.9045000+	.04980-	.34270-	1.048	2028.3	.002118
660.0160	2.5	.50	.7100	10.409	.1005000-	.32400	1.0745-	1.050	2028.3	.002118
661.0160	2.5-	.50	.3800	5.7091	.6030000-	.17400-	.12440+	1.008	2028.3	.002067
662.0160	0 +	.50	.3800	5.7190	.9045000-	.14900-	.03390-	1.008	2028.3	.002067
663.0160	2.5+	.50	.3800	5.7190	1.105500-	.17400-	.11520-	1.008	2028.3	.002067
664.0160	2.5+	.40	.3900	5.8185	1.507500-	.02490-	.38460-	1.008	2028.3	.002079
665.0160	0 +	.40	.4100	6.1234	.4020000-	.07460-	.65360-	1.009	2028.3	.002079
666.0160	2.5-	.40	.4100	6.1341	.9045000-	.14900-	.62890-	1.009	2028.3	.002079
679.0160	2.5-	.40	.7200	10.611	.1005000	.19800	.47790-	1.050	2026.2	.002107
680.0160	0 +	.40	.7200	10.611	.2010000+	.09950+	.15010	1.049	2026.2	.002107

G.E.M.
FORCE STATIC

681.0160	2.5+	.40	.7200	10.614	.2010000-	.1740+	.25760-	1.048	2026.2	.002107
682.0160	2.5+	.40	1.600	21.196	4.321500+	1.120+	.85130-	1.298	2026.2	.002344
683.0160	0 +	.40	1.590	21.135	4.422000+	.2985+	.81920-	1.297	2026.2	.002344
684.0160	2.5-	.40	1.600	21.322	3.618000+	.8460-	.94250-	1.297	2026.2	.002344
697.0160	2.5+	.35	4200	6.1366	.9045000-	.00000+	.18650-	1.010	2025.5	.002106
698.0160	0 +	.35	.4180	6.1598	.2010000-	.0249-	.06430+	1.010	2025.5	.002106
699.0160	2.5-	.35	.4170	6.1795	1.105500-	.1740-	.62520+	1.010	2025.5	.002106
706.0160	2.5-	.35	.7130	10.435	.5025000+	.2990-	.45130-	1.049	2026.2	.002118
707.0160	0 +	.35	.7130	10.449	.0000000+	.00000+	.76500+	1.050	2026.2	.002118
708.0160	2.5+	.35	.7430	10.908	.5025000+	.0746+	.40050+	1.050	2026.2	.002118
721.0160	2.5+	.35	1.602	21.502	2.512500+	1.145+	2.0571-	1.3030	2026.2	.002313
722.0160	0 +	.35	1.595	21.408	3.115500+	.3980+	2.3046-	1.304	2026.2	.002313
723.0160	2.5-	.35	1.603	21.503	3.216000+	.6970-	3.9904-	1.304	2026.2	.002313
724.0160	2.5+	.30	.4140	6.2177	.2512500+	.0498+	.29380+	1.009	2024.1	.002053

G.E.M.
FORCE STATIC

725.0160	0 +	.30	4130	6.2459	.6532500+	.02490-	.07980+	1.009	2024.1	.002053
726.0160	2.5-	30	4120	6.2523	.6532500+	.17400-	.26770	1.009	2024.1	.002053
739.0160	2.5+	.30	7230	10.300	5.628000+	.37400+	.75040+	1.047	2026.2	.002170
740.0160	0 +	.30	7210	10.322	4.824000+	.02490-	.52590+	1.047	2026.2	.002170
741.0160	2.5-	30	7210	10.330	5.527500+	.59750-	.22480-	1.047	2026.2	.002170
742.0160	2.5-	30	1627	21.045	35.47650+	2.4400-	4.2592-	1.298	2026.2	.002394
743.0160	0 +	30	1624	21.057	34.17000+	.12450	.27940+	1.298	2026.2	.002394
744.0160	2.5-	.30	1622	21.071	33.46650+	2.1050+	5.8392+	1.299	2026.2	.002394
757.0160	2.5-	25	4110	6.1039	.5025000+	.19900-	.80770-	1.010	2024.8	.002080
758.0160	0 +	.25	.4090	6.1063	.6030000+	.24900-	.67020	1.009	2024.8	.002080
759.0160	2.5+	.25	4090	6.1276	1.206000+	.29900	.69360-	1.009	2024.8	.002080
769.0160	2.5+	.25	7120	10.438	5.728500+	.32400+	.75220+	1.047	2024.8	.002118
770.0160	0 +	.25	7120	10.438	6.733500+	.00000+	.80270+	1.047	2024.8	.002118
771.0160	2.5-	.25	7130	10.442	5.728500+	.39800-	.17090+	1.049	2024.8	.002118

G.E.M.
FORCE STATIC

781.0160	2.5+	.25	1.596	21.382	35.57700+	2.5400+	4.6060+	1.303	2022.6	.002318
782.0160	0 +	.25	1.603	21.470	37.78800+	.14900+	1.3874+	1.303	2022.6	.002318
783.0160	2.5-	.25	1.605	21.454	37.78800+	2.2650-	2.8220-	1.303	2022.6	.002318
784.0160	5.0+	.15	.4190	5.3279	.2010000+	.12'50+	.25979-	1.010	2019.1	.002042
785.0160	2.5+	.15	.4180	6.3347	.4020000+	.14900+	.02470+	1.010	2019.1	.002042
786.0160	0 +	.15	.4170	6.3414	.2010000	.02490+	.32660-	1.010	2019.1	.002042
787.0160	2.5~	.15	.4160	6.3481	.7035000+	.04980	.44640-	1.010	2019.1	.002042
788.0160	5.0	.15	.4160	6.3431	.3015000-	.19'00-	.65230-	1.010	2019.1	.002042
804.0160	5.0-	.15	.7200	10.721	5.326500+	1.3200-	3.0200-	1.048	2012.7	.002155
805.0160	2.5-	.15	.7200	10.355	6.733500+	1.0700-	1.7177-	1.049	2012.7	.002155
806.0160	0 +	.15	.7200	10.370	7.135500+	.67200-	1.0969-	1.049	2012.7	.002155
807.0160	2.5+	.15	.7200	10.370	5.326500+	.02490~	.3448-	1.049	2012.7	.002155
808.0160	5.0+	.15	.7200	10.373	5.226000+	.34800+	.24960+	1.049	2012.7	.002155
824.0160	5.0-	.15	1.613	21.260	41.50650+	5.5400-	6.3657-	1.300	2012.7	.002355

G.E.M.
FORCE STATIC

825.0160	2.5-	.15	1.605	21.161	46.73250+	3.0850-	1.9556-	1.300	2012.7	.002355
826.0160	0 +	.15	1.614	21.260	51.65700+	.22400-	1.9790+	1.300	2012.7	.002355
827.0160	2.5+	.15	1.604	21.160	44.01900+	2.1900+	5.1134+	1.300	2012.7	.002355
828.0160	5.0+	.15	1.612	21.259	39.69750+	4.3800+	7.4758+	1.300	2012.7	.002355
829.0160	5.0-	.10	.4580	6.7797	2.110500+	.49800	1.4938-	1.010	2012.7	.002079
830.0160	2.5	.10	.4560	6.8100	2.412000+	.59750-	1.5567-	1.010	2012.7	.002079
831.0160	0 +	.10	.4560	6.8220	2.613000+	.42300-	1.3481	1.010	2012.7	.002079
832.0160	2.5+	.10	.4550	6.8430	3.216000+	.24900-	1.4727-	1.010	2012.7	.002079
833.0160	5.0+	.10	.4550	6.8454	2.110500+	.12450-	.98210-	1.010	2012.7	.002079
854.0160	5.0+	.10	.7100	10.403	9.447000+	.97100+	.58500+	1.048	2009.9	.002112
855.0160	2.5+	.10	.7460	10.946	12.06000+	.44300+	.10300+	1.049	2009.9	.002112
856.0160	0 +	.10	.7080	10.417	13.36650+	.07470-	.14730	1.047	2009.9	.002112
857.0160	2.5-	.10	.7090	10.425	11.85900+	.82200-	.94400-	1.048	2009.9	.002112
858.0160	5.0-	.10	.7090	10.429	9.246000+	1.2450-	1.9622-	1.048	2009.9	.002112

G.E.M.
FORCE STATIC

859 0160	5.0-	.10	1.602	21.189	60.50100+	6.8000	8.2453-	1.297	2009.9	.002339
860 0160	2.5-	.10	1.600	21.198	68.44050+	4.0100-	4.2285-	1.297	2009.9	.002339
861 1060	0 +	.10	1.598	21.220	81.10350+	.34800+	.35920+	1.297	2009.9	.002339
862 0160	2.5+	.10	1.605	21.313	66.93300+	2.9400+	2.9010+	1.299	2009.9	.002339
863 0160	5.0+	.10	1.604	21.306	58.69200+	5.9000+	6.9107+	1.298	2009.9	.002339
886 0160	2.5+	.05	.4050	5.8366	2.311500+	.42300+	1.2680+	1.008	2005.7	.002059
887 0160	0 +	.05	.4060	6.1232	3.417000+	.17400+	1.2019+	1.008	2005.7	.002059
888 0160	2.5-	.05	.4060	5.8366	3.417000+	.17400-	.04770+	1.008	2005.7	.002059
889 0160	2.5-	.05	.7140	10.500	23.11500+	1.3200-	1.0804-	1.047	2005.7	.002114
890 0160	0 +	.05	.7140	10.500	27.73800+	.17400+	1.1514+	1.047	2005.7	.002114
891 0160	2.5+	.05	.7140	10.500	22.61250+	1.9900+	2.8009+	1.047	2005.7	.002114
898 0160	2.5+	.05	1.570	20.493	134.5695+	6.1500+	9.0535+	1.300	2013.5	.002354
899 0160	0 +	.05	1.610	21.231	162.4080+	.34800-	1.5358+	1.300	2013.5	.002354

G.E.M
FORCE STATIC

900.0160	2.5-	.05	1.600	21.105	136.9815+	7.0200+	5.8105	1.300	2013.5	.002354
907.0160	2.5+	.03	.4220	5.1733	3.618000+	.14920+	.67860+	1.009	2012.7	.002086
908.0160	0 +	.03	.4210	5.6548	4.924500+	.02490-	.49770+	1.009	2012.7	.002086
909.0160	2.5-	.03	.3800	5.2564	3.417000+	.17400-	.36770+	1.008	2012.7	.002086
922.0160	2.5-	.03	.7400	10.890	33.86850+	1.4180-	.32330+	1.048	2012.7	.002111
923.0160	0 +	.03	.7390	10.880	39.69750+	.04980-	1.8808+	1.048	2012.7	.002111
924.0160	2.5+	.03	.7410	10.900	32.56200+	1.4180+	3.9487+	1.048	2012.7	.002111
925.0160	2.5-	.03	1.600	21.219	187.7340+	9.1900-	7.4022-	1.299	2012.7	.002333
926.0160	0 +	.03	1.599	21.278	221.5020+	.82200-	3.9000+	1.298	2012.7	.002333
927.0160	2.5+	.03	1.609	21.404	182.3070+	7.5400+	12.168+	1.299	2012.7	.002333
938.0160	0 +	.01	.4400	6.6730	12.21075+	.14900-	.55990-	1.009	2012.7	.002047
939.0160	0 +	.01	.7610	10.655	63.11400+	.74600-	.38280-	1.048	2028.3	.002217
943.0160	0 +	.01	1.635	21.078	339.4890+	1.0940-	6.0330+	1.297	2028.3	.002421

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT

AND A JET CONVERGENCE ANGLE OF 60°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP

February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE STATIC

951.0560	0	+	.01	3700	5.3800	21.50700+	.22400+	.66500+	1.010	2019.8	.002134
952.0560	0	+	.01	.4400	6.2600	99.19350+	1.2700+	11.783+	1.049	2019.8	.002184
974.0560	2.5		.03	.4630	6.7000	11.05500+	.44800	.06380+	1.009	2015.6	.002126
975.0560	0	+	.03	.4610	6.7300	11.95950+	.00000+	.38800+	1.009	2015.6	.002126
976.0560	2.5+		.03	.4610	6.7400	11.65800+	.44800+	1.0305+	1.009	2015.6	.002126
977.0560	2.5+		.03	1.033	14.760	61.85775+	2.8400+	8.4362+	1.049	2015.6	.002177
978.0560	0	+	.03	1.015	14.470	66.33000+	.42300-	6.1042+	1.050	2015.6	.002177
979.0560	2.5-		.03	1.033	14.740	61.55625+	2.3150-	3.7827+	1.048	2015.6	.002177
1007.056	2.5-		.05	.5930	8.2500	8.542500+	.67230-	1.0712-	1.009	2032.6	.002223
1008.056	0	+	.05	.5920	8.2800	10.55250+	.14940-	.08020-	1.010	2032.6	.002223
1009.056	2.5+		.05	.5930	8.3000	10.05000+	.17430+	.20700-	1.009	2032.6	.002223
1010.056	2.5+		.05	1.290	17.730	45.02400+	1.8675+	3.4647+	1.048	2032.6	.002260
1011.056	0	+	.05	1.291	17.740	46.73250+	.09960+	2.6725+	1.048	2032.6	.002260
1012.056	2.5-		.05	1.301	17.870	44.42100+	2.4651-	.28950-	1.048	2032.6	.002260

G. E. M.
FORCE STATIC

1047.056	5.0+	10	.6700	9.4900	4.824000+	.52250+	.59910-	1.010	2038.2	.002176
1048.056	2.5+	.10	.6180	8.7900	4.824000+	.32370+	.36950-	1.009	2038.2	.002176
1049.056	0 +	.10	.6170	8.8000	4.824000+	.04980+	.89780-	1.009	2038.2	.002176
1050.056	2.5-	.10	.6170	8.8000	5.025000+	.39840-	.94730-	1.009	2038.2	.002176
1051.056	5.0-	.10	.6170	8.8000	4.623000+	.82170-	1.3304-	1.009	2038.2	.002176
1062.056	5.0+	.10	1.420	20.380	21.10500+	3.0876+	2.9324+	1.049	2024.8	.002152
1063.056	2.5+	.10	1.420	20.450	25.32600+	1.6185+	2.0845+	1.050	2024.8	.002152
1064.056	0 +	.10	1.400	20.200	26.33100+	.04980+	.85520+	1.049	2024.8	.002152
1065.056	2.5-	.10	1.400	20.210	25.32600+	1.7928-	1.4509-	1.048	2024.8	.002152
1066.056	5.0-	.10	1.420	20.520	24.72300+	3.8595-	3.1370-	1.049	2024.8	.002152
1092.056	5.0-	.15	.6400	9.2200	3.819000+	.77190-	.80100-	1.010	2021.2	.002115
1093.056	2.5-	.15	.6400	9.2300	3.819000+	.72210-	.85100-	1.009	2021.2	.002115

G.E.M.
FORCE STATIC

1094.056	0	+	.15	.6400	9.2500	4.221000+	.52290-	1.3024-	1.009	2021.2	.002115.
1095.056	2.5+		.15	.6300	9.2600	4.120500+	.19920-	.57170-	1.009	2021.2	.002115
1096.056	5.0+		.15	.6300	9.2800	5.527500+	.17430-	.78390-	1.009	2021.2	.002115
1122.056	5.0+		.15	1.440	21.040	15.47700+	2.1165+	.54690+	1.050	2009.2	.002112
1123.056	2.5+		.15	1.410	20.720	16.28100+	1.3944+	1.9350+	1.049	2009.2	.002112
1124.056	0	+	.15	1.400	20.580	16.58250+	.22410+	.88140+	1.048	2009.2	.002112
1125.056	2.5-		.15	1.410	20.730	16.58250+	.92130-	1.4359-	1.049	2009.2	.002112
1126.056	5.0-		.15	1.410	20.760	14.67300+	2.2655-	3.3301-	1.048	2009.2	.002112
1141.056	2.5+		.25	.6000	8.8200	2.211000+	.09960+	.10880+	1.008	2007.1	.002067
1142.056	0	+	.25	.6300	9.3100	2.814000+	.00000+	.13630+	1.008	2007.1	.002067
1143.056	2.5-		.25	.6300	9.3400	2.713500+	.37350-	.21780+	1.008	2007.1	.002067
1162.056	2.5-		.25	1.160	17.260	7.437000+	.62250-	1.4929+	1.048	2007.1	.002091

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G.E.M.
FORCE STATIC

1163.056	0	+	.25	1.160	17.230	9.145500+	.19920+	2.0037+	1.048	2007.1	.002091
1164.056	2.5	+	.25	1.160	17.230	7.638000+	.94620+	2.3195+	1.048	2007.1	.002091
1183.056	2.5	+	.30	.6500	9.5800	2.010000+	.12450+	.81280-	1.010	2014.2	.002104
1184.056	0	+	.30	.6500	9.5800	3.115500+	.07470-	.67450-	1.010	2014.2	.002104
1185.056	2.5	-	.30	.6500	9.5800	2.311500+	.09960-	1.0463-	1.009	2014.2	.002104
1186.056	2.5	-	.30	1.420	20.630	9.748500+	.74700-	2.3757-	1.048	2014.2	.002137
1187.056	0	+	.30	1.430	20.800	11.75850+	.12450-	.89110-	1.050	2014.2	.002137
1188.056	2.5	+	.30	1.440	20.950	9.648000+	.69720+	.04480-	1.050	2014.2	.002137
1207.056	2.5	+	.35	.6600	9.7000	1.407000+	.02490+	.80730-	1.010	2016.3	.002114
1208.056	0	+	.35	.6600	9.7000	2.110500+	.19920-	.43840-	1.010	2016.3	.002114
1209.056	2.5	-	.35	.6580	9.6800	1.809000+	.37350-	.05370-	1.009	2016.3	.002114
1222.056	2.5	+	.35	1.466	20.600	4.422000+	.34860+	.35980-	1.049	2022.6	.002208
1223.056	0	+	.35	1.466	20.600	5.929500+	.17430-	.69160-	1.049	2022.6	.002208

G.E.M.
FORCE STATIC

1224.056	2.5-	.35	1.452	20.400	4.924500+	.74700-	1.2737-	1.049	2022.6	.002208
1240.056	2.5+	.40	.6320	9.2900	.8040000+	.04980-	.86960-	1.009	2022.6	.002117
1241.056	0 +	.40	.6310	9.2600	.7035000+	.02490+	.08930-	1.009	2022.6	.002117
1242.056	2.5-	.40	.6290	9.2400	.6030000+	.24900+	.26720+	1.009	2022.6	.002117
1261.056	2.5-	.40	1.431	21.300	1.206000+	.04980+	1.9262+	1.049	2022.6	.002088
1262.056	0 +	.40	1.412	21.000	3.316500+	.59760+	4.9763+	1.048	2022.6	.002088
1263.056	2.5+	.40	1.414	21.030	1.708500+	.77190+	3.7918+	1.048	2022.6	.002088
1273.056	2.5+	.50	.6280	9.3100	.5025000+	.12450-	.50140-	1.009	2020.5	.002096
1274.056	0 +	.50	.6270	9.3000	.4020000+	.02490-	.50020-	1.009	2020.5	.002096
1275.056	2.5-	.50	.6250	9.2600	.4020000+	.22410-	.36330+	1.009	2020.5	.002096
1285.056	2.5-	.50	1.418	21.000	1.206000+	.42330-	.77900-	1.049	2019.1	.002100
1286.056	0 +	.50	1.416	20.950	.6030000+	.37350-	.57000-	1.049	2019.1	.002100
1287.056	2.5+	.50	1.414	20.920	.7035000+	.07470+	.23410+	1.049	2019.1	.002100

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT
 AND A JET CONVERGENCE ANGLE OF 30°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_O	BP	ρ
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February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE STATIC

1306.053	2.5+	.50	.7000	10.050	1.105500+	.04980+	1.2190-	1.009	2010.6	.002162
1307.053	0 +	.50	7150	10.270	2.110500+	.14930-	.62540-	1.009	2010.6	.002162
1308.053	2.5-	.50	.7150	10.270	1.005000+	.24900-	.15280-	1.009	2010.6	.002162
1327.053	2.5-	.50	1.500	23.020	1.507500+	.64700-	2.3723-	1.048	2006.4	.002144
1328.053	0 +	.50	1.590	23.020	2.412000+	.09960+	1.4175-	1.048	2006.4	.002144
1329.053	2.5+	.50	1.570	22.750	1.608000+	.87100+	.62900+	1.048	2006.4	.002144
1339.053	2.5+	.40	.6800	9.910	2.311500+	.22400-	.53670-	1.009	2006.4	.002134
1340.053	0 +	.40	.7090	10.320	2.110500+	.07470-	.18280-	1.010	2006.4	.002134
1341.053	2.5-	.40	.7090	10.320	1.809000+	.27400-	.13680-	1.010	2006.4	.002134
1351.053	2.5-	.40	1.558	22.100	3.919500+	.79700-	.90130-	1.047	2001.4	.002186
1352.053	0 +	.40	1.565	22.230	6.030000+	.19920-	.19690-	1.048	2001.4	.002186
1353.053	2.5+	.40	1.563	22.200	4.924500+	.67300+	.46740+	1.047	2001.4	.002186

G.E.M.
FORCE STATIC

1372.053	2.5+	.35	.6910	10.060	1.909500+	.07470+	1.2739-	1.009	2002.1	.002137
1373.053	0 +	.35	.7080	10.290	2.412000+	.04980-	.75520-	1.010	2002.1	.002137
1374.053	2.5-	.35	.7070	10.290	2.211000+	.19920-	.86160-	1.010	2002.1	.002137
1393.053	2.5-	.35	1.522	22.600	5.226000+	.27400-	1.2672+	1.048	2002.1	.002094
1394.053	0 +	.35	1.525	22.630	6.633000+	.34850-	1.6356+	1.048	2002.1	.002094
1395.053	2.5+	.35	1.530	22.730	5.326500+	1.2450+	1.9730+	1.048	2002.1	.002094
1405.053	2.5+	.30	.6750	9.9700	1.909500+	.17420+	.01550-	1.010	1998.6	.002102
1406.053	0 +	.30	.6720	9.9200	2.914500+	.02490+	.32520+	1.010	1998.6	.002102
1407.053	2.5-	.30	.6700	9.9000	1.708500+	.14930-	.94860+	1.010	1998.6	.002102
1426.053	2.5-	.30	1.508	22.900	6.231000+	.49800-	4.4464+	1.048	1998.6	.002042
1427.053	0 +	.30	1.517	23.030	7.939500+	.12450+	4.1405+	1.048	1998.6	.002042
1428.053	2.5+	.30	1.510	22.960	6.934500+	1.0710+	5.2825+	1.048	1998.6	.002042
1438.053	2.5+	.25	.6950	10.370	2.412000+	.17420+	.16370+	1.010	1995.8	.002081

G.E.M.
FORCE STATIC

1439.053	0	+	.25	.6950	10.370	2.512500+	.00000+	.47080+	1.010	1995.8	.002081
1440.053	2.5-		.25	.6940	10.350	2.512500+	.24900-	.63960+	1.010	1995.8	.002081
1450.053	2.5-		.25	1.552	22.000	9.145500+	1.2200-	.84190-	1.048	2017.0	.002196
1451.053	0	+	.25	1.560	22.100	9.145500+	.27400-	.23340+	1.048	2017.0	.002196
1452.053	2.5+		.25	1.568	22.200	10.15050+	.79700+	.47780+	1.048	2017.0	.002196
1477.053	5.0+		.15	.6880	9.9500	3.015000+	.38850+	.86800-	1.009	2022.6	.002151
1478.053	2.5+		.15	.7150	10.330	3.216000+	.12430+	.62100-	1.010	2022.6	.002151
1479.053	0	+	.15	.7110	10.280	3.517500+	.04980+	.01330+	1.010	2022.6	.002151
1480.053	2.5-		.15	.6960	10.040	2.914500+	.02490-	.13390-	1.010	2022.6	.002151
1481.053	5.0-		.15	.6830	9.8600	2.613000+	.24900-	.12350-	1.009	2022.6	.002151
1497.053	5.0-		.15	1.540	22.230	11.55750+	2.1650-	.17270-	1.049	2022.6	.002150
1498.053	2.5-		.15	1.530	22.100	12.96450+	1.0960-	.26220-	1.048	2022.6	.002150
1499.053	0	+	.15	1.530	22.100	15.07500+	.14930-	.26110+	1.049	2022.6	.002150

G.E.M.
FORCE STATIC

1500.053	2.5+	.15	1.530	22.100	14.17050+	1.0710+	.65450+	1.048	2022.6	.002150
1501.053	5.0+	.15	1.550	22.400	11.35650+	2.2400+	1.4068+	1.048	2022.6	.002150
1532.053	5.0+	.10	.6980	9.8400	3.819000+	.44800+	.55750-	1.010	2037.5	.002203
1533.053	2.5+	.10	.6890	9.7200	4.824000+	.19920+	.03750-	1.010	2037.5	.002203
1534.053	0 +	.10	.6750	9.5100	4.723500+	.09960-	.43900+	1.009	2037.5	.002203
1535.053	2.5-	.10	.6730	9.6000	4.924500+	.34850-	.06840-	1.009	2037.5	.002177
1536.053	5.0-	.10	.6940	9.9400	5.527500+	.54800-	.36820-	1.009	2037.5	.002167
1567.053	5.0+	.10	1.521	22.100	16.68300+	3.2850+	1.1171+	1.048	2037.5	.002140
1568.053	2.5+	.10	1.506	21.850	20.30100+	1.8190+	.68540+	1.049	2037.5	.002140
1569.053	0 +	.10	1.465	21.300	21.20550+	.47300+	.11710+	1.048	2037.5	.002140
1570.053	2.5-	.10	1.482	21.550	18.89400+	.57300-	.89790-	1.048	2037.5	.002140
1571.053	5.0-	.10	1.493	21.700	17.78850+	2.0900-	2.3022-	1.048	2037.5	.002140
1581.053	2.5-	.05	.6100	8.8000	7.939500+	.52300-	4.8897-	1.010	2031.2	.002155

G.E.M.
FORCE STATIC

1582.053	0 +	.05	.6100	8.8000	8.241000+	.07470-	.66610-	1.010	2031.2	.002155
1583.053	2.5+	.05	.6000	8.6500	7.336500+	.32350+	.18640+	1.010	2031.2	.002155
1593.053	2.5+	.05	1.360	19.580	36.78300+	2.1650+	5.6432+	1.049	2030.4	.002159
1594.053	0 +	.05	1.350	19.450	38.59200+	.57300+	4.3279+	1.050	2030.4	.002159
1595.053	2.5-	.05	1.360	19.580	36.28050+	1.3200-	4.2904+	1.049	2030.4	.002159
1614.053	2.5+	.03	.5500	7.8000	9.246000+	.37350+	.59530+	1.010	2024.8	.002191
1615.053	0 +	.03	.5200	7.3800	8.844000+	.04980-	.55200+	1.009	2024.8	.002191
1616.053	2.5-	.03	.5200	7.3800	9.648000+	.49800-	.25130-	1.009	2024.8	.002191
1625.053	2.5+	.03	1.150	16.410	51.25500+	3.0650+	11.287+	1.048	2024.8	.002179
1627.053	0 +	.03	1.150	16.410	52.96350+	1.0460+	8.9090+	1.049	2024.8	.002179
1628.053	2.	.03	1.150	16.410	50.14950+	1.2450-	6.0092+	1.048	2024.8	.002179
1641.053	0 +	.01	.3170	4.6300	15.97950+	.29850-	.16870-	1.010	2028.3	.002130
1648.053	0 +	.01	.4970	7.1200	85.52550+	1.3940+	13.393+	1.049	2028.3	.002173

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF FIVE PER CENT
 AND A JET CONVERGENCE ANGLE OF 0°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP	ρ
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February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G. E. M.
FORCE STATIC

1677.050	2.5+	.50	.8420	11.660	2.613000+	.04980-	.66650-	1.011	2031.8	.002243
1678.050	0 +	.50	.8280	11 450	3.015000+	.22400-	.09890-	1.011	2031.8	.002243
1679.050	2.5-	.50	.8300	11.533	3.015000+	.29900-	.15050-	1.010	2031.8	.002243
1698.050	2.5-	.50	1 739	24.850	4.221000+	.42300-	1.6587-	1.048	2031.8	.002173
1699.050	0 +	.50	1.708	24.433	4.924500+	.22400+	.35100-	1.048	2031.8	.002173
1700.050	2.5+	.50	1.722	24.575	4.321500+	.22400+	1.8072-	1.048	2031.8	.002173
1710.050	2.5+	.40	.7730	10.898	3.115500+	.00000+	1.7282-	1.010	2029.7	.002202
1711.050	0 +	.40	.7890	11.120	2.713500+	.04980-	.83470-	1.010	2029.7	.002202
1712.050	2.5-	.40	.7910	11.140	2.314000+	.19900-	.51050-	1.010	2029.7	.002202
1728.050	2.5+	.40	1.709	25.000	6.532000+	.34900+	1.2561-	1.049	2026.2	.002121
1729.050	0 +	.40	1.682	24.600	7.537500+	.19900+	.61130+	1.048	2026.2	.002121
1730.050	2.5-	.40	1.722	25.200	6.733500+	.57300-	1.2911-	1.049	2026.2	.002121

**G.E.M.
FORCE STATIC**

1743.050	2.5+	.35	.8030	11.040	2.914500+	.14930-	1.3245-	1.010	2026.9	.002259
1744.050	0 +	.35	.7950	10.940	2.512000+	.19920-	.26110-	1.010	2026.9	.002259
1745.050	2.5-	.35	.8070	11.114	2.814000+	.34850-	.44330-	1.010	2026.9	.002259
1764.050	2.5-	.35	1.764	25.338	6.130500+	.44800-	2.2362-	1.048	2026.9	.002157
1765.050	0 +	.35	1.731	24.918	7.638000+	.00000+	1.4760-	1.049	2026.9	.002157
1766.050	2.5+	.35	1.712	24.669	6.331500+	.47300+	1.0045-	1.048	2026.9	.002157
1776.050	2.5+	.30	.7700	10.854	2.914500+	.07470-	1.1031-	1.009	2026.2	.002203
1777.050	0 +	.30	.7700	10.854	2.512500+	.09960+	.45430+	1.010	2026.2	.002203
1778.050	2.5-	.30	.7700	10.854	3.015000+	.22400-	.32600+	1.010	2026.2	.002203
1788.050	2.5+	.30	1.732	25.100	7.939000+	.14940+	2.3876-	1.049	2024.8	.002143
1789.050	0 +	.30	1.730	25.063	8.844000+	.19920-	2.0157-	1.049	2024.8	.002143
1790.050	2.5-	.30	1.752	25.400	7.135000+	.77190-	2.1006-	1.049	2024.8	.002143

G.E.M.
FORCE STATIC

1809.050	2.5+	.25	.7690	10.915	2.814000+	.04980+	1.8695-	1.010	2019.8	.002184
1810.050	0 +	.25	.7680	10.917	2.713500+	.19920+	.66360-	1.011	2019.8	.002184
1811.050	2.5-	.25	.7870	11.180	2.311500+	.02490+	.28080-	1.010	2019.8	.002184
1830.050	2.5-	.25	1.732	25.457	6.934500+	.34860-	1.3320-	1.049	2019.8	.002111
1831.050	0 +	.25	1.707	25.107	8.341500+	.17430+	.40810-	1.049	2019.8	.002111
1832.050	2.5+	.25	1.713	25.195	8.241000+	.64740+	1.1898-	1.049	2019.8	.002111
1848.050	5.0+	.15	.7800	10.722	3.417000+	.12450+	1.1271-	1.010	2027.6	.002260
1849.050	2.5+	.15	.7800	10.718	3.716500+	.07470+	.03410+	1.010	2027.6	.002260
1850.050	0 +	.15	.7800	10.738	3.719500+	.07470+	.22090-	1.010	2027.6	.002251
1851.050	2.5-	.15	.7800	10.759	2.713500+	.04980-	.44030+	1.010	2027.6	.002251
1852.050	5.0-	.15	.8100	11.194	2.512500+	.22410-	.19320-	1.010	2027.6	.002251
1868.050	5.0+	.15	1.743	24.700	8.844000+	.57270+	4.4601-	1.048	2032.6	.002194
1869.050	2.5+	.15	1.736	24.600	10.75350+	.00000+	4.9040-	1.049	2032.6	.002194
1870.050	0 +	.15	1.737	24.600	12.36150+	.64740-	4.4695-	1.049	2032.6	.002194

**G. E. M.
FORCE STATIC**

1871.050	2.5-	.15	1.772	25.047	10.35150+	1.0707-	3.2670-	1.049	2032.6	.002194
1872.050	5.0-	.15	1.771	25.080	7.437000+	1.3197-	1.1966-	10.48	2032.6	.002194
1903.050	5.0+	.10	.7540	10.468	3.919500+	.27390+	1.2702-	1.010	2030.4	.002225
1904.050	2.5+	.10	.7540	10.484	4.422000+	.12450+	.00380-	1.010	2032.6	.002225
1905.050	0 +	.10	.7520	10.496	4.723500+	.02490+	.01830+	1.010	2032.6	.002225
1906.050	2.5-	.10	.7510	10.502	4.020000+	.02490+	1.0255+	1.010	2032.6	.002225
1907.050	5.0-	.10	.7710	10.760	3.316500+	.24900-	.70820+	1.009	2032.6	.002225
1923.050	5.0+	.10	1.726	24.730	13.16550+	.84660+	3.7680-	1.049	2035.4	.002167
1924.050	2.5+	.10	1.702	24.400	15.97950+	.27390+	3.4699-	1.049	2035.4	.002167
1925.050	0 +	.10	1.686	24.160	17.98950+	.57270-	2.6198-	1.049	2035.4	.002167
1926.050	2.5-	.10	1.714	24.550	16.88400+	1.3944-	3.4715-	1.048	2035.4	.002167
1927.050	5.0-	.10	1.766	25.250	14.77350+	2.6394-	4.7453-	1.048	2035.4	.002167

G.E.M.
FORCE STATIC

1952.050	2.5+	.05	.7400	10.147	7.537500+	.32400+	1.1250+	1.010	2046.0	.002264
1953.050	0 +	.05	.7400	10.147	7.638000+	.00000+	1.0742+	1.011	2046.0	.002264
1954.050	2.5-	.05	.7300	10.029	6.432000+	.02490-	1.8002+	1.011	2046.0	.002264
1964.050	2.5+	.05	1.599	22.494	30.65250+	.89600+	2.3941-	1.049	2042.4	.002199
1965.050	0 +	.05	1.597	22.533	33.46650+	.47300-	3.1151-	1.049	2042.4	.002199
1966.050	2.5-	.05	1.593	22.532	30.95400+	1.9920-	4.2893-	1.048	2042.4	.002199
1985.050	2.5+	.03	.6170	8.5993	9.447000+	.69720+	2.0114+	1.010	2038.9	.002119
1986.050	0 +	.03	.6160	8.6173	9.648000+	.29880+	1.5714+	1.010	2038.9	.002119
1987.050	2.5-	.03	.6160	8.6334	9.246000+	.14940-	1.0859+	1.010	2038.9	.002119
1997.050	2.5+	.03	1.428	19.500	41.00400+	1.7181+	2.3540+	1.048	2015.6	.002276
1998.050	0 +	.03	1.428	19.500	43.01400+	.14940+	.54770+	1.048	2015.6	.002276
1999.050	2.5-	.03	1.445	19.743	42.31050+	2.3904-	2.2312-	1.048	2015.6	.002276
2015.050	0 +	.01	.4540	6.4972	17.28600+	.37350+	.40220+	1.010	2019.8	.002170
2016.050	0 +	.01	.7870	10.898	80.60100+	1.2450+	9.0408+	1.048	2019.8	.002246

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT
AND A JET CONVERGENCE ANGLE OF 60°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP	ρ
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February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

**G.E.M.
FORCE STATIC**

2035	106	2.5+	.25	2.650	33.840	2.512500+	3.5109+	.60080-	1.155	2036.1	.002431
2036	106	0 +	.25	2.640	33.750	5.427000+	.42330-	2.7421-	1.155	2036.1	.002431
2037	106	2.5-	.25	2.640	33.750	2.211000+	3.9840-	4.3983-	1.155	2036.1	.002431
2078	106	5.0+	.15	2.600	34.100	15.57750+	8.5905+	2.7041+	1.154	2031.8	.002370
2079	106	2.5+	.15	2.590	33.950	20.30100+	4.6314+	3.0436+	1.155	2031.8	.002370
2080	106	0 +	.15	2.590	33.950	23.91900+	.02490+	1.1332+	1.155	2031.8	.002370
2081	106	2.5-	.15	2.580	33.800	19.89900+	3.3864-	.83970+	1.154	2031.8	.002370
2082	106	5.0-	.15	2.590	33.950	11.95950+	7.8933-	1.8078-	1.154	2031.8	.002370
2133	106	5.0+	.10	1.670	23.580	16.58250+	2.6145+	.48420+	1.049	2019.8	.002200
2134	106	2.5+	.10	1.651	23.320	18.99450+	1.4193+	1.4916+	1.049	2019.8	.002200
2135	106	0 +	.10	1.642	23.200	20.20050+	.09960+	.26700+	1.049	2019.8	.002200
2136	106	2.5-	.10	1.641	23.190	18.79350+	1.3446-	.09820+	1.049	2019.8	.002200
2137	106	5.0-	.10	1.656	23.160	14.77350+	2.7141-	.35880+	1.049	2019.8	.002200

**G.E.M.
FORCE STATIC**

2178.106	2.5+	.05	1.485	20.650	43.61700+	1.9422+	1.3660+	1.049	2021.2	.002235
2179.106	0 +	.05	1.456	20.230	48.34050+	.04980+	1.0012+	1.050	2021.2	.002235
2180.106	2.5-	.05	1.466	20.380	43.71750+	2.2659-	.84560-	1.048	2021.2	.002235
2211.106	2.5-	.03	1.268	17.620	64.01850+	3.4113-	1.9419-	1.049	2021.9	.002236
2212.106	0 +	.03	1.199	16.670	68.74200+	.07470-	1.6267+	1.049	2021.9	.002236
2213.106	2.5+	.03	1.252	17.400	64.11900+	3.0876+	4.6524+	1.049	2021.9	.002236
2234.106	0 +	.01	.5300	7.2800	99.39450+	.07470-	.65570+	1.049	2021.2	.002260

TABULATED FORCE AND MOMENT DATA
 FOR A CIRCULAR, ANNULAR JET
 GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT
 AND A JET CONVERGENCE ANGLE OF 30°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	B_P	ρ
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February 1962
 University of Wichita
 Department of Engineering Research
 Wichita, Kansas

G.E.M.
FORCE STATIC

2255.103	2.5+	.25	1.938.	26.360	4.824000+	.74700+	.17850-	1.049	2050.9	.002283
2256.103	0 +	.25	1.932	26.300	5.829000+	.04980+	.14050+	1.048	2050.9	.002283
2257.103	2.5-	.25	1.938	26.360	3.015000+	.47310-	.15200-	1.049	2050.9	.002283
2298.103	5.0+	.15	1.950	26.140	6.733500+	1.4940+	.12980+	1.049	2050.9	.002319
2299.103	2.5+	.15	1.940	26.000	8.140500+	.74700+	.49190+	1.049	2050.9	.002319
2300.103	0 +	.15	1.940	26.000	8.140500+	.49800-	.28430+	1.049	2050.9	.002319
2301.103	2.5-	.15	1.950	26.140	7.437000+	.74700-	.37780-	1.048	2050.9	.002319
2302.103	5.0+	.15	1.940	26.000	5.226000+	1.2948-	1.0753+	1.048	2050.9	.002319
2353.103	5.0+	.10	1.880	25.980	9.346500+	1.6683+	1.0621+	1.048	2048.8	.002249
2354.103	2.5+	.10	1.880	25.980	10.05000+	1.0707+	1.3442+	1.048	2048.8	.002249
2355.103	0 +	.10	1.890	26.100	11.55750+	.00000+	1.2306+	1.048	2048.8	.002249
2356.103	2.5-	.10	1.880	25.980	9.547500+	.64740-	1.6840+	1.048	2048.8	.002249
2357.103	5.0-	.10	1.890	26.100	7.638000+	1.3944-	1.6458+	1.048	2048.8	.002249

G.E.M.
FORCE STATIC

2398.103	2.5+	.05	1.809	24.980	25.22550+	1.4442+	1.1977+	1.048	2046.7	.002249
2399.103	0 +	.05	1.801	24.900	27.03450+	.12450-	.49240+	1.048	2046.7	.002249
2400.103	2.5-	.05	1.804	24.930	24.22050+	1.4691-	.19720+	1.048	2046.7	.002249
2431.103	2.5+	.03	1.650	22.330	44.92350+	2.1414+	1.8670+	1.048	2052.4	.002296
2432.103	0 +	.03	1.640	22.200	48.84300+	.00000+	.29900-	1.048	2052.4	.002296
2433.103	2.5-	.03	1.650	22.330	45.62700+	2.6643-	2.6984-	1.048	2052.4	.002296
2454.103	0 +	.01	1.012	13.480	90.95250+	.12450+	5.6536+	1.048	2051.6	.002337

TABULATED FORCE AND MOMENT DATA
FOR A CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODEL

with

A SLOT TO DIAMETER RATIO OF TEN PER CENT
AND A JET CONVERGENCE ANGLE OF 0°

Static Test

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP	ρ
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February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M.
FORCE STATIC

2490.100	2.5+	.25	1.900	26.000	1.909500+	.74700-	1.1587-	1.049	2038.2	.002269
2491.100	0 +	.25	1.890	25.870	2.110500+	.02490-	.02140+	1.049	2038.2	.002269
2492.100	2.5-	.25	1.880	25.750	1.809000+	.94620+	1.2784+	1.049	2038.2	.002269
2533.100	5.0+	.15	1.922	25.200	1.608000+	.17430-	1.8846-	1.049	2056.6	.002333
2534.100	2.5+	.15	1.919	25.050	2.110500+	.14940-	1.9452-	1.048	2056.6	.002333
2535.100	0 +	.15	1.914	25.050	2.512500+	.12450+	1.3209-	1.048	2056.6	.002333
2536.100	2.5-	.15	1.907	24.920	1.809000+	1.1205+	.82100-	1.048	2056.6	.002333
2537.100	5.0-	.15	1.912	25.050	1.306500+	1.3197+	.35060-	1.048	2056.6	.002333
2588.100	5.0+	.10	1.900	25.500	3.316500+	.32370-	.92710-	1.048	2061.5	.002316
2589.100	2.5+	.10	1.900	25.500	4.020000+	.34870-	1.0163-	1.049	2061.5	.002316
2590.100	0 +	.10	1.900	25.500	5.829000+	.07470-	1.4750-	1.049	2061.5	.002316
2591.100	2.5-	.10	1.900	25.500	5.929500+	.54780+	1.7253-	1.048	2061.5	.002316

G.E.M.
FORCE STATIC

2592.100	5.0-	.10	1.900	25.500	2.512500+	1.0209+	.95240-	1.048	2061.5	.002316
2633.100	2.5+	.05	1.831	24.700	15.67800+	.27390+	1.3107-	1.049	2061.5	.002317
2634.100	0 +	.05	1.813	24.300	16.48200+	.14940-	.22720-	1.048	2061.5	.002317
2635.100	2.5-	.05	1.820	24.400	15.37650+	.89640-	.76100-	1.048	2061.5	.002317
2666.100	2.5+	.03	1.703	22.550	31.35600+	1.7679+	.93720+	1.048	2053.0	.002350
2667.100	0 +	.03	1.673	22.130	34.27050+	.14940+	.72870+	1.048	2053.0	.002350
2668.100	2.5-	.03	1.688	22.300	31.95900+	2.2410-	2.0625-	1.048	2053.0	.002350
2689.100	0 +	.01	1.270	16.620	75.97800+	.79680-	13.292+	1.049	2048.1	.002375

TABULATED FORCE AND MOMENT DATA
FOR A SERIES OF CIRCULAR, ANNULAR JET
GROUND EFFECT MACHINE MODELS

with

SLOT TO DIAMETER RATIOS OF ONE, FIVE, TEN PER CENT
AND JET CONVERGENCE ANGLES OF 0° , 30° , 60°

Static Force Tests
Slanted Ground Board

Key for Reading Following Data:

RUN NO.	α	h/D	w	Q	L	D	M	P_M/P_0	BP
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February 1962
University of Wichita
Department of Engineering Research
Wichita, Kansas

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2710.100	2.5+	.03	1.520	21.007	35.80356+	.771900+	4.93400+	1.049	2022.2
2711.100	2.5+	.05	1.680	23.519	14.15960+	.946200+	4.02664+	1.049	2022.2
2712.100	2.5+	.10	1.830	25.856	5.057000+	.049800+	.904000-	1.049	2022.2
2713.100	2.5-	.10	1.810	25.676	4.753580+	.074700-	.741500-	1.049	2021.2
2714.100	2.5-	.05	1.670	23.595	14.86758+	.199200-	3.08200+	1.049	2021.2
2715.100	2.5-	.03	1.510	21.110	34.58988+	1.14540-	4.38350+	1.049	2021.2

**G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD**

2716.103	2.5-	.03	1.480	20.517	50.26658+	.846600-	1.60500+	1.048	2015.1
2717.103	2.5-	.05	1.670	23.322	26.09412+	.498000+	5.38755+	1.049	2015.1
2718.103	2.5-	.10	1.850	25.937	11.83338+	.149400-	1.07068-	1.048	2013.0
2719.103	2.5+	.10	1.850	25.985	11.93452+	.074700+	.573459+	1.048	2013.0
2720.103	2.5+	.05	1.670	23.354	26.59982+	.572700+	3.30315+	1.048	2013.0
2721.103	2.5+	.03	1.470	20.293	48.34492+	.348600+	3.73900+	1.048	2013.0

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2722.106	2.5+	.03	1.188	15.999	70.89914+	1.54380-	2.11175+	1.049	2033.5
2723.106	2.5+	.05	1.490	20.275	47.33352+	.697200-	1.75227+	1.049	2033.5
2724.106	2.5+	.10	1.680	23.079	22.65536+	.124500+	3.08999+	1.048	2033.5
2725.106	2.5-	.10	1.680	23.079	22.75650+	.099600+	2.66161+	1.048	2033.5
2726.106	2.5-	.05	1.477	20.098	48.85062+	.597600-	1.51655+	1.049	2033.5
2727.106	2.5-	.03	1.205	16.203	68.37064+	1.31970-	.335400+	1.048	2033.5

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2728.056	2.5-	.03	1.073	14.342	77.57438+	1.17030+	8.52550+	1.049	2039.2
2729.056	2.5-	.05	1.296	17.431	59.36918+	.174300+	4.30200+	1.048	2039.2
2730.056	2.5-	.10	1.445	19.615	37.92750+	.224100-	1.10932+	1.048	2039.2
2731.056	2.5+	.10	1.440	19.631	37.82636+	.074700+	1.73023+	1.049	2034.2
2732.056	2.5+	.05	1.288	17.496	58.99350+	.124500+	4.85700+	1.049	2034.2
2733.056	2.5+	.03	1.049	14.162	77.16982+	.448200+	9.87500+	1.049	2034.2

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2734.053	2.5+	.03	1.184	16.072	58.56006+	.224100+	9.41500+	1.049	2033.5
2735.053	2.5+	.05	1.382	18.905	40.45600+	.249000+	4.56200+	1.049	2033.5
2736.053	2.5+	.10	1.522	20.889	22.04852+	.124500+	1.80040+	1.048	2033.5
2737.053	2.5-	.10	1.522	20.895	21.44168+	.024900+	1.72050+	1.049	2033.5
2738.053	2.5-	.05	1.386	18.888	39.34346+	.199200+	1.70300+	1.049	2033.5
2739.053	2.5-	.03	1.201	16.247	56.63840+	.747000+	5.42700+	1.049	2033.5

**G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD**

2740.050	2.5-	.03	1.433	19.456	43.08564+	.174000+	1.91800+	1.049	2033.5
2741.050+	2.5-	.05	1.555	21.301	30.74656+	.373000+	1.34900+	1.049	2033.5
2742.050	2.5+	.10	1.664	22.980	17.39608+	.846000+	2.65900+	1.049	2033.5
2743.050	2.5+	.10	1.662	22.996	17.90178+	.872000+	2.68500+	1.049	2030.7
2744.050	2.5+	.05	1.552	21.372	31.85910+	.597000+	2.96900+	1.049	2030.7
2745.050	2.5+	.03	1.380	18.971	47.94036+	.523000+	4.80400+	1.049	2030.7

**G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD**

2746.016	2.5+	.03	.6020	8.2910	37.52294+	.373500-	1.16283+	1.049	2021.5
2747.016	2.5+	.05	.6020	8.3007	24.47588+	.124500-	.221603+	1.049	2021.5
2748.016	2.5+	.10	.6020	8.3189	11.32768+	.099600-	.606234+	1.049	2021.5
2749.016	2.5-	.10	.6010	8.2844	11.52996+	.149400-	.168034-	1.049	2019.3
2750.016	2.5-	.05	.6020	8.2995	25.79070+	.149400-	.104862-	1.048	2021.5
2751.016	2.5-	.03	.6020	8.3121	40.15258+	.124500-	.435070-	1.049	2021.5

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2752.013	2.5-	.03	.3910	5.1510	51.25500+	.771900+	6.54750+	1.049	2045.5
2753.013	2.5-	.05	.4240	5.5680	37.18500+	.473100+	4.10507+	1.049	2045.5
2754.013	2.5-	.10	.4570	5.9918	24.62250+	.249000+	2.94900+	1.048	2046.9
2755.013	2.5+	.10	.4580	5.9853	23.81850+	.323700+	3.15800+	1.049	2048.3
2756.013	2.5+	.05	.4260	5.5615	35.87850+	.547800+	4.10400+	1.049	2049.8
2757.013	2.5+	.03	.3930	5.1406	45.82800+	.846600+	6.42800+	1.049	2049.8

G.E.M. STATIC FORCE TESTS
SLANTED GROUND BOARD

2758.010	2.5+	.03	.6600	8.5888	36.00584+	.298800+	4.41612+	1.049	2051.2
2759.010	2.5+	.05	.6900	8.9914	24.47588+	.024900+	2.22411+	1.047	2051.2
2760.010	2.5+	.10	.7400	9.6706	13.04706+	.074700-	1.47624+	1.049	2051.2
2761.010	2.5-	.10	.7300	9.6053	10.21514+	.000000+	1.81344+	1.049	2051.2
2762.010	2.5-	.05	.6900	9.0171	25.38614+	.174300+	3.74619+	1.048	2051.2
2763.010	2.5-	.03	.6500	8.5080	36.51154+	.298800+	2.60921+	1.049	2051.2